



## SEQUENCE LISTING

#5

<110> Li, Li  
 Padigaru, Muralidhara  
 Vernet, Corine  
 Fernandes, Elma  
 Shimkets, Richard  
 Spaderna, Steven  
 Majumder, Kumud

<120> Novel Polypeptides and Nucleic Acids Encoding Same

<130> 15966-721 US

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 <141> 2001-03-12

<150> 60/188,316  
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<170> PatentIn Ver. 2.1

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<213> Homo sapiens

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 20 25 30

Arg Arg Pro Pro Pro Arg Ala Ser Thr Lys Thr Gly Ser Gln Pro Ala  
 35 40 45

Met Pro Ser Pro Leu Arg Pro Gln Gly Ser Ala Gly Val Leu Pro Glu  
 50 55 60

Pro Arg Val Pro Val Gln Lys Pro Gly Ile Asn Ala Ala Ser Pro Ile  
 65 70 75 80

Gly Thr Val Arg Val Glu Arg Gly Arg Pro Thr Val Ser Pro Ala Gly  
 85 90 95

Arg Gly Ser Pro Arg Gly Gly His Val Gly Gly Leu Thr Ala Pro Ser  
 100 105 110

Thr Pro Gly His Ser Asp His Gly Leu His Thr Gln Lys Gln Ser Gly  
 115 120 125

Ser His Ala Trp Leu Cys Cys Gln Gln Thr Ala Pro Asn Leu Pro Cys  
 130 135 140

Ser Ser Ser Gln Glu Lys Arg Pro Ala Ala Ser Leu Pro Gly Met Val  
 145 150 155 160

Gly Pro Leu Arg His Ser Leu Gly Val Gln Ala Thr His Pro His Ser  
 165 170 175

Thr Gly Val Arg Gly Ser Val Arg Pro Trp Asp Gly Pro Ala Gly Thr  
 180 185 190

Gly Gly Gln Arg Val Arg Gly Gly Arg Arg Ser Pro Thr Lys Gly Ser  
 195 200 205

Ser Gln Ala Cys Val Gly Pro Arg Gly Ala Ala Pro Pro Gly Trp Asp  
 210 215 220

Lys Ala Gly Ser Trp Leu Ser Ser Ala Thr Ala Gln Leu Pro Gln Gly  
 225 230 235 240

Thr Lys Gly Arg Leu Arg Asp Glu Val Leu Thr His Thr Met Gly Lys  
 245 250 255

Pro Arg His Gly Lys Val Gly Gly Gly Ala Ala Arg Leu Ala Pro Arg  
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Ser Gln Ala Gly Arg Pro Glu Gly Arg Ala Met Gln Pro Leu Gly Arg  
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His Glu Leu Gly Ser Gly Cys Pro Gln Pro  
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<211> 2092

<212> DNA

<213> Homo sapiens

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<210> 4

<211> 283

<212> PRT

<213> Homo sapiens

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      20              25              30

Arg Arg Pro Pro Pro Arg Ala Ser Thr Lys Thr Gly Ser Gln Pro Ala
      35              40              45

Met Pro Ser Pro Leu Arg Pro Gln Gly Ser Ala Gly Val Leu Pro Glu
      50              55              60

Pro Arg Val Pro Val Gln Lys Pro Gly Ile Asn Ala Ala Ser Pro Ile
      65              70              75              80

Gly Thr Val Arg Val Glu Arg Gly Arg Pro Thr Val Ser Pro Ala Gly
      85              90              95

Arg Gly Ser Pro Arg Gly Gly His Val Gly Gly Leu Thr Ala Pro Ser
      100             105             110

Thr Pro Gly His Ser Asp His Gly Leu His Thr Gln Lys Gln Ser Gly

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115		120		125
Ser His Ala Trp Leu Cys Cys Gln Gln Thr Ala Pro Asn Leu Pro Cys				
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Ser Ser Ser Gln Glu Lys Arg Pro Ala Ala Ser Leu Pro Gly Met Val				
145		150		155
				160
Gly Pro Leu Arg His Ser Leu Gly Val Gln Ala Thr His Pro His Ser				
	165		170	175
Thr Gly Val Arg Gly Ser Val Arg Pro Trp Asp Gly Pro Ala Gly Thr				
	180		185	190
Gly Gly Gln Arg Val Arg Gly Gly Arg Arg Ser Pro Thr Lys Gly Ser				
	195		200	205
Ser Gln Ala Cys Val Gly Pro Arg Gly Ala Ala Pro Pro Gly Trp Asp				
	210		215	220
Lys Ala Gly Ser Trp Leu Ser Ser Ala Thr Ala Gln Leu Pro Gln Gly				
	225		230	235
				240
Thr Lys Gly Arg Leu Arg Asp Glu Val Leu Thr His Thr Met Gly Lys				
	245		250	255
Pro Arg His Gly Lys Val Gly Gly Gly Ala Ala Arg Leu Ala Pro Arg				
	260		265	270
Ser Gln Ala Gly Arg Pro Glu Gly Arg Ala Met				
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&lt;211&gt; 1011

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5

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<210> 6

<211> 298

<212> PRT

<213> Homo sapiens

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Met Glu Pro Val Pro Gly Ser Arg Arg Gln Thr Asp Lys Gly Cys Ser
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Gly Asp Thr Ala His Leu Pro Leu Ser Cys Leu Gly Ala Gln Glu Ser
      20              25             30

Arg Arg Pro Pro Pro Arg Ala Ser Thr Lys Thr Gly Ser Gln Pro Ala
      35              40             45

Met Pro Ser Pro Leu Arg Pro Gln Gly Ser Ala Gly Val Leu Pro Glu
      50              55             60

Pro Arg Val Pro Val Gln Lys Pro Gly Ile Asn Ala Ala Ser Pro Ile
      65              70             75             80

Gly Thr Val Lys Val Glu Arg Gly Arg Pro Thr Val Ser Pro Ala Gly
      85              90             95

Arg Gly Ser Pro Arg Gly Gly His Val Gly Gly Leu Thr Ala Pro Ser
      100             105            110

Thr Pro Gly His Ser Asp His Gly Leu His Thr Gln Lys Gln Ser Gly
      115            120            125

Ser His Ala Trp Leu Cys Cys Gln Gln Thr Ala Pro Asn Leu Pro Cys
      130            135            140

Ser Ser Ser Gln Glu Lys Arg Pro Ala Ala Ser Leu Pro Gly Met Val
      145            150            155            160

Gly Pro Leu Arg His Ser Leu Gly Val Gln Ala Thr His Pro His Ser
      165            170            175

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Thr Gly Val Arg Gly Ser Val Arg Pro Trp Asp Gly Pro Ala Gly Thr  
 180 185 190

Gly Gly Gln Arg Val Arg Gly Gly Arg Arg Ser Pro Thr Lys Gly Ser  
 195 200 205

Ser Gln Ala Cys Val Gly Pro Arg Gly Ala Ala Pro Pro Gly Trp Asp  
 210 215 220

Lys Ala Gly Ser Trp Leu Ser Ser Ala Thr Ala Gln Leu Pro Gln Gly  
 225 230 235 240

Thr Lys Gly Arg Leu Arg Asp Glu Val Leu Thr His Thr Met Gly Lys  
 245 250 255

Pro Arg His Gly Lys Val Gly Gly Gly Ala Ala Arg Leu Ala Pro Arg  
 260 265 270

Ser Gln Ala Gly Arg Pro Glu Gly Arg Ala Met Gln Pro Leu Gly Arg  
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His Glu Leu Gly Ser Gly Cys Pro Gln Pro  
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<210> 7

<211> 1747

<212> DNA

<213> Homo sapiens

<400> 7

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<210> 8

<211> 559

<212> PRT

<213> Homo sapiens

<400> 8

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      20             25             30

Arg Arg Gly Arg Ala Gly Arg Ala Ser Arg Gln Arg Ala Arg Gly Arg
      35             40             45

Pro Val Ala Leu Arg Pro Ala Gly Val Thr Val Pro Pro Pro Ser Arg
      50             55             60

Pro Ser Arg Pro Ala Gly Leu Phe Tyr Ala Arg Thr Pro Asp Thr Gly
      65             70             75             80

His Arg Ala Gly Ala Ala Val Gly Ala Thr Arg Arg Phe Ala Gly Arg
      85             90             95

Arg Gly Cys Ala Arg His Gly Ala Ala Val Pro Ala Ala Pro Cys Gly
      100            105            110

Cys Cys Glu Arg Leu Val Leu Asn Val Ala Gly Leu Arg Phe Glu Thr
      115            120            125

Arg Ala Arg Thr Leu Gly Arg Phe Pro Asp Thr Leu Leu Gly Asp Pro
      130            135            140

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Gly	Gly	Arg	Leu	Arg	Arg	Pro	Ala	His	Val	Pro	Leu	Asp	Val	Phe	Leu
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Glu	Glu	Val	Ala	Phe	Tyr	Gly	Leu	Gly	Ala	Ala	Ala	Leu	Ala	Arg	Leu
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	210					215					220				
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		275					280					285			
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Arg	Leu	Pro	Phe	Asn	Asp	Pro	Phe	Phe	Val	Val	Glu	Thr	Leu	Cys	Ile
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Cys	Trp	Phe	Ser	Phe	Glu	Leu	Leu	Val	Arg	Leu	Leu	Val	Cys	Pro	Ser
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Lys	Ala	Ile	Phe	Phe	Lys	Asn	Val	Met	Asn	Leu	Ile	Asp	Phe	Val	Ala
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Ile	Leu	Pro	Tyr	Phe	Val	Ala	Leu	Gly	Thr	Glu	Leu	Ala	Arg	Gln	Arg
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Gly	Val	Gly	Gln	Gln	Ala	Met	Ser	Leu	Ala	Ile	Leu	Arg	Val	Ile	Arg
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385					390					395					400

Leu Gln Ile Leu Gly Gln Thr Leu Arg Ala Ser Met Arg Glu Leu Gly  
 405 410 415

Leu Leu Ile Phe Phe Leu Phe Ile Gly Val Val Leu Phe Ser Ser Ala  
 420 425 430

Val Tyr Phe Ala Glu Val Asp Arg Val Asp Ser His Phe Thr Ser Ile  
 435 440 445

Pro Glu Ser Phe Trp Trp Ala Val Val Thr Met Thr Thr Val Gly Tyr  
 450 455 460

Gly Asp Met Ala Pro Val Thr Val Gly Gly Lys Ile Val Gly Ser Leu  
 465 470 475 480

Cys Ala Ile Ala Gly Val Leu Thr Ile Ser Leu Pro Val Pro Val Ile  
 485 490 495

Val Ser Asn Phe Ser Tyr Phe Tyr His Arg Glu Thr Glu Gly Glu Glu  
 500 505 510

Ala Gly Met Phe Ser His Val Asp Met Gln Pro Cys Gly Pro Leu Glu  
 515 520 525

Gly Lys Ala Asn Gly Gly Leu Val Asp Gly Glu Val Pro Glu Leu Pro  
 530 535 540

Pro Pro Leu Trp Ala Pro Pro Arg Glu His Leu Val Thr Glu Val  
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<210> 9

<211> 1080

<212> DNA

<213> Homo sapiens

<400> 9

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<210> 10

<211> 251

<212> PRT

<213> Homo sapiens

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 20 25 30

Gln Ala Ser Arg Glu Ala Gly Ala Ala Ala Leu Arg Asn Val Ala Gln  
 35 40 45

Arg Leu Phe Glu Asn Tyr Gln Thr Gln Ser Glu Glu Val Arg Lys Lys  
 50 55 60

Gln Glu Gly Ser Lys Gln Leu Leu Gln Val Asn Lys Leu Glu Lys Glu  
 65 70 75 80

Gln Lys Leu Lys Gln His Val Glu Asn Leu Asn Gln Val Ala Glu Lys  
 85 90 95

Leu Glu Glu Lys His Ser Gln Ile Thr Glu Leu Glu Asn Leu Val Gln  
 100 105 110

Arg Met Glu Lys Glu Lys Arg Thr Leu Leu Glu Arg Lys Leu Ser Leu  
 115 120 125

Glu Asn Lys Leu Leu Gln Leu Lys Ser Ser Ala Thr Tyr Gly Lys Ser  
 130 135 140

Cys Gln Asp Leu Gln Arg Glu Ile Ser Ile Leu Gln Glu Gln Ile Ser  
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His Leu Gln Phe Val Ile His Ser Gln His Gln Asn Leu Arg Ser Val  
 165 170 175



<210> 12

<211> 335

<212> PRT

<213> Homo sapiens

<400> 12

Met Thr Thr Val Ala Val Thr Thr Glu Ile Pro Pro Arg Asp Lys Met  
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20 25 30

Glu Thr Glu Tyr Val Lys Lys Ile Arg Thr Thr Leu Gln Lys Ile Arg  
35 40 45

Thr Gln Met Phe Lys Asp Glu Ile Arg His Asp Ser Thr Asn His Lys  
50 55 60

Leu Asp Ala Lys His Cys Gly Asn Leu Gln Gln Gly Ser Asp Ser Glu  
65 70 75 80

Met Asp Pro Ser Cys Cys Ser Leu Asp Leu Leu Met Lys Lys Ile Lys  
85 90 95

Gly Lys Asp Leu Gln Leu Leu Glu Met Asn Lys Glu Asn Glu Val Leu  
100 105 110

Lys Ile Lys Leu Gln Ala Ser Arg Glu Ala Gly Ala Ala Ala Leu Arg  
115 120 125

Asn Val Ala Gln Arg Leu Phe Glu Asn Tyr Gln Thr Gln Ser Glu Glu  
130 135 140

Val Arg Lys Lys Gln Glu Asp Ser Lys Gln Leu Leu Gln Val Asn Lys  
145 150 155 160

Leu Glu Lys Glu Gln Lys Leu Lys Gln His Val Glu Asn Leu Asn Gln  
165 170 175

Val Ala Glu Lys Leu Glu Glu Lys His Ser Gln Ile Thr Glu Leu Glu  
180 185 190

Asn Leu Val Gln Arg Met Glu Lys Glu Lys Arg Thr Leu Leu Glu Arg  
195 200 205

Lys Leu Ser Leu Glu Asn Lys Leu Leu Gln Leu Lys Ser Ser Ala Thr

210	215	220
Tyr Gly Lys Ser Cys Gln Asp Leu Gln Arg Glu Ile Ser Ile Leu Gln		
225	230	235 240
Glu Gln Ile Ser His Leu Gln Phe Val Ile His Ser Gln His Gln Asn		
245	250	255
Leu Arg Ser Val Ile Gln Glu Met Glu Gly Leu Lys Asn Asn Leu Lys		
260	265	270
Glu Gln Asp Lys Arg Ile Glu Asn Leu Arg Glu Lys Val Asn Ile Leu		
275	280	285
Glu Ala Gln Asn Lys Glu Leu Lys Thr Gln Val Ala Leu Ser Ser Glu		
290	295	300
Thr Pro Arg Thr Lys Val Ser Lys Ala Val Ser Thr Ser Glu Leu Lys		
305	310	315 320
Thr Glu Gly Val Ser Pro Tyr Leu Met Leu Ile Arg Leu Arg Lys		
325	330	335

<210> 13  
 <211> 1442  
 <212> DNA  
 <213> Homo sapiens

<400> 13  
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 tattaatttt acttcgtctt ggccagaatt cacaatgaca acagtgcagc tgaccacaga 180  
 aattccccca agggataaga tggaagataa ttctgccttg tatgagtcta cgtccgctca 240  
 cattattgaa gaaaccgagt atgtgaaaaa gattcgaact actctgcaa agatcaggac 300  
 ccagatgttt aaagatgaaa taagacatga cagtacaaat cacaaactag atgcaaagca 360  
 ctgtggaaac cttcaacagg gctctgattc tgaaatggat cttcttggc gcagtttgga 420  
 tttgcttatg aaaaagataa aaggaaaaga cctacagctc ttagaaatga acaaagagaa 480  
 tgaagtattg aaaatcaagc tgcaagcctc cagagaagca ggagcagcag ctctgagaaa 540  
 cgtggcccag agattatttg aaaactacca aacgcaatct gaagaagtga gaaagaagca 600  
 ggaggacagt aaacaattac tccagggtta caagcttgaa aaagaacaga aattgaaaca 660  
 acatgttgaa aatctgaatc aagttgctga aaaacttgaa gaaaaacaca gtcaaattac 720  
 agaattggag aaccttgtag agagaatgga aaaggaaaag agaacactac tagaaagaaa 780  
 actgtctttg gaaaacaagc tactgcaact caaatccagt gctacatatg gaaaagtgtg 840  
 ccaggatctt cagagggaga tttccattct ccaggagcag atctctcatc tgcagtttgt 900  
 gattcactcc caacatcaga acctgcgcag tgtcatccag gagatggaag gattaaaaaa 960  
 taatttaaaa gaacaagaca aaagaattga aaatctcaga gaaaagggtta acatacttga 1020  
 agcccagaat aaagaactaa aaaccaggt agcactttca tctgaaactc ctaggacaaa 1080

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ggtatctaag gctgtctcta caagtgaatt gaagaccgaa ggtgtttccc cttatttaatt 1140
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agtcttattt attctctgaa acacagccca agtttcatgt taaaatggca aaatgccatt 1260
atttaaattg aacttattac ataccaatgg ctttgcaaga agatgacatt tcagaaaatc 1320
aaacaaatct atatttaatg gatggactct tcaaaactta ccaaatagtt gaagaaacca 1380
ggtgccttct catgatggaa gacagattct gctttaaatt aaaaaaaaaa aaatctgaaa 1440
aa

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<210> 14  
 <211> 335  
 <212> PRT  
 <213> Homo sapiens

<400> 14  
 Met Thr Thr Val Thr Val Thr Thr Glu Ile Pro Pro Arg Asp Lys Met  
 1 5 10 15  
 Glu Asp Asn Ser Ala Leu Tyr Glu Ser Thr Ser Ala His Ile Ile Glu  
 20 25 30  
 Glu Thr Glu Tyr Val Lys Lys Ile Arg Thr Thr Leu Gln Lys Ile Arg  
 35 40 45  
 Thr Gln Met Phe Lys Asp Glu Ile Arg His Asp Ser Thr Asn His Lys  
 50 55 60  
 Leu Asp Ala Lys His Cys Gly Asn Leu Gln Gln Gly Ser Asp Ser Glu  
 65 70 75 80  
 Met Asp Pro Ser Cys Cys Ser Leu Asp Leu Leu Met Lys Lys Ile Lys  
 85 90 95  
 Gly Lys Asp Leu Gln Leu Leu Glu Met Asn Lys Glu Asn Glu Val Leu  
 100 105 110  
 Lys Ile Lys Leu Gln Ala Ser Arg Glu Ala Gly Ala Ala Ala Leu Arg  
 115 120 125  
 Asn Val Ala Gln Arg Leu Phe Glu Asn Tyr Gln Thr Gln Ser Glu Glu  
 130 135 140  
 Val Arg Lys Lys Gln Glu Asp Ser Lys Gln Leu Leu Gln Val Asn Lys  
 145 150 155 160  
 Leu Glu Lys Glu Gln Lys Leu Lys Gln His Val Glu Asn Leu Asn Gln  
 165 170 175

Val Ala Glu Lys Leu Glu Glu Lys His Ser Gln Ile Thr Glu Leu Glu  
180 185 190

Asn Leu Val Gln Arg Met Glu Lys Glu Lys Arg Thr Leu Leu Glu Arg  
195 200 205

Lys Leu Ser Leu Glu Asn Lys Leu Leu Gln Leu Lys Ser Ser Ala Thr  
210 215 220

Tyr Gly Lys Ser Cys Gln Asp Leu Gln Arg Glu Ile Ser Ile Leu Gln  
225 230 235 240

Glu Gln Ile Ser His Leu Gln Phe Val Ile His Ser Gln His Gln Asn  
245 250 255

Leu Arg Ser Val Ile Gln Glu Met Glu Gly Leu Lys Asn Asn Leu Lys  
260 265 270

Glu Gln Asp Lys Arg Ile Glu Asn Leu Arg Glu Lys Val Asn Ile Leu  
275 280 285

Glu Ala Gln Asn Lys Glu Leu Lys Thr Gln Val Ala Leu Ser Ser Glu  
290 295 300

Thr Pro Arg Thr Lys Val Ser Lys Ala Val Ser Thr Ser Glu Leu Lys  
305 310 315 320

Thr Glu Gly Val Ser Pro Tyr Leu Met Leu Ile Arg Leu Arg Lys  
325 330 335

<210> 15  
<211> 1056  
<212> DNA  
<213> Homo sapiens

<400> 15  
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ctattgattg ccggcatctc ccagagctgc agtgtggcag aaatcgagga ggctctgcag 120  
gctggtttag ctcccttggg ggagtacaga ctgcttgga ggatgttcag gagggatgag 180  
aacaggaaag tagccttagt agggcttact gcggagacta gtcacgccct ggtccctaag 240  
gagataccgg gaaaagggggg tatctggaga gtgatcttta agccccctga cccagataat 300  
acatttttaa gcagattaaa tgaattttta gcgggagagg gcatgacagt ggggtgagttg 360  
agcagagctc ttggacatga aaatggctcc ttagaccag agcagggcat gatcccgga 420  
atgtgggccc ctatgttggc acaggcatta gaggtcttc agcctgccct gcaatgcttg 480  
aagtataaaa agctgagagt gttctcgggc agggagtctc cagaaccagg agaagaagaa 540  
tttggacgct ggatgtttca tactactcag atgataaagg cgtggcaggt gccagatgta 600  
gagaagagaa ggcgattgct agagagcctt cgaggccag cacttgatgt tattcgtgtc 660



ctcaagataa acaatccttt aattactgtc gatgaatgtc tgcaggctct tgaggaggtta 720  
 tttgggggta cagataatcc tagggagttg cagggtcaa atctaaccac ttaccagaag 780  
 gatgaggaaa agttgtcggc ttatgtacta aggctggagc ctttggtaca gaagctggta 840  
 cagagaggag caattgagag agatgctgtg aatcaggccc gcctagacca agtcattgct 900  
 ggggcagtcc acaaaacaat tcgcagagag cttaatctgc cagaggatgg cccagcccct 960  
 gggtttcttg agttattggt actaataaag gattatgagg cagctgagga ggaggaggcc 1020  
 cttctccagg caatattgga aggtaatctc acctga 1056

<210> 16  
 <211> 351  
 <212> PRT  
 <213> Homo sapiens

<400> 16  
 Met Thr Leu Arg Leu Leu Glu Asp Trp Cys Arg Gly Met Asp Met Asn  
 1 5 10 15

Pro Arg Lys Ala Leu Leu Ile Ala Gly Ile Ser Gln Ser Cys Ser Val  
 20 25 30

Ala Glu Ile Glu Glu Ala Leu Gln Ala Gly Leu Ala Pro Leu Gly Glu  
 35 40 45

Tyr Arg Leu Leu Gly Arg Met Phe Arg Arg Asp Glu Asn Arg Lys Val  
 50 55 60

Ala Leu Val Gly Leu Thr Ala Glu Thr Ser His Ala Leu Val Pro Lys  
 65 70 75 80

Glu Ile Pro Gly Lys Gly Gly Ile Trp Arg Val Ile Phe Lys Pro Pro  
 85 90 95

Asp Pro Asp Asn Thr Phe Leu Ser Arg Leu Asn Glu Phe Leu Ala Gly  
 100 105 110

Glu Gly Met Thr Val Gly Glu Leu Ser Arg Ala Leu Gly His Glu Asn  
 115 120 125

Gly Ser Leu Asp Pro Glu Gln Gly Met Ile Pro Glu Met Trp Ala Pro  
 130 135 140

Met Leu Ala Gln Ala Leu Glu Ala Leu Gln Pro Ala Leu Gln Cys Leu  
 145 150 155 160

Lys Tyr Lys Lys Leu Arg Val Phe Ser Gly Arg Glu Ser Pro Glu Pro  
 165 170 175

Gly Glu Glu Glu Phe Gly Arg Trp Met Phe His Thr Thr Gln Met Ile  
 180 185 190

Lys Ala Trp Gln Val Pro Asp Val Glu Lys Arg Arg Arg Leu Leu Glu  
 195 200 205

Ser Leu Arg Gly Pro Ala Leu Asp Val Ile Arg Val Leu Lys Ile Asn  
 210 215 220

Asn Pro Leu Ile Thr Val Asp Glu Cys Leu Gln Ala Leu Glu Glu Val  
 225 230 235 240

Phe Gly Val Thr Asp Asn Pro Arg Glu Leu Gln Val Lys Tyr Leu Thr  
 245 250 255

Thr Tyr Gln Lys Asp Glu Glu Lys Leu Ser Ala Tyr Val Leu Arg Leu  
 260 265 270

Glu Pro Leu Leu Gln Lys Leu Val Gln Arg Gly Ala Ile Glu Arg Asp  
 275 280 285

Ala Val Asn Gln Ala Arg Leu Asp Gln Val Ile Ala Gly Ala Val His  
 290 295 300

Lys Thr Ile Arg Arg Glu Leu Asn Leu Pro Glu Asp Gly Pro Ala Pro  
 305 310 315 320

Gly Phe Leu Gln Leu Leu Val Leu Ile Lys Asp Tyr Glu Ala Ala Glu  
 325 330 335

Glu Glu Glu Ala Leu Leu Gln Ala Ile Leu Glu Gly Asn Phe Thr  
 340 345 350

<210> 17

<211> 499

<212> DNA

<213> Homo sapiens

<400> 17

caaaatggtt aagaacacaa accagtagcg tgctcacgcc gatcccgctc cgctgggttc 60  
 gcacgctccg cacaccagcc tgcgcgcacc atgggccacc gttcagcagc tggaaggaag 120  
 atggcgccctg gcggacagca aaggctttga tgcatacatg aagaaactag gagtgggaat 180  
 atctttgcgc aatatgggcg caatggccaa accagactgt atcatcactt gtgatggcaa 240  
 aaacctcacc ataaaaactg agagcacttt gaaaacaaca cagttttctt gtaccctggg 300  
 agagaagttt gaaggaacca cagctgttg cagaaaaact cagactgtct gcagctttac 360  
 agatggtgca ttggttccgc atcaggagtg ggatgggaag gaaaacacaa taacaagaaa 420  
 attgaaagat gcacagtggtc tggattgtgt cacgaacaat gtcacctgta ctcggtatcta 480

tgaaaaagta gaataaaaa

499

&lt;210&gt; 18

&lt;211&gt; 163

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 18

Met Val Lys Asn Thr Asn Gln Tyr Ala Ala His Ala Asp Pro Ala Pro  
 1 5 10 15

Leu Val Pro His Ala Pro His Thr Ser Leu Arg Ala Pro Trp Ala Thr  
 20 25 30

Val Gln Gln Leu Glu Gly Arg Trp Arg Leu Ala Asp Ser Lys Gly Phe  
 35 40 45

Asp Ala Tyr Met Lys Lys Leu Gly Val Gly Ile Ser Leu Arg Asn Met  
 50 55 60

Gly Ala Met Ala Lys Pro Asp Cys Ile Ile Thr Cys Asp Gly Lys Asn  
 65 70 75 80

Leu Thr Ile Lys Thr Glu Ser Thr Leu Lys Thr Thr Gln Phe Ser Cys  
 85 90 95

Thr Leu Gly Glu Lys Phe Glu Gly Thr Thr Ala Val Gly Arg Lys Thr  
 100 105 110

Gln Thr Val Cys Ser Phe Thr Asp Gly Ala Leu Val Pro His Gln Glu  
 115 120 125

Trp Asp Gly Lys Glu Asn Thr Ile Thr Arg Lys Leu Lys Asp Ala Ser  
 130 135 140

Val Val Asp Cys Val Thr Asn Asn Val Thr Cys Thr Arg Ile Tyr Glu  
 145 150 155 160

Lys Val Glu

&lt;210&gt; 19

&lt;211&gt; 413

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 19

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gcacatggc caccgttcag cagctggaag gaagatggcg cctggcggac agcaaaggct 60
ttgatgcata catgaagaaa ctaggagtgg gaatatcttt gcgcaatatg ggcgcaatgg 120
ccaaaccaga ctgtatcatc acttgtgatg gcaaaaacct caccataaaa actgagagca 180
ctttgaaaac aacacagttt tcttgtaccc tgggagagaa gtttgaagga accacagctg 240
ttggcagaaa aactcagact gtctgcagct ttacagatgg tgcattgggt ccgcatcagg 300
agtgggatgg gaaggaaaac acaataacaa gaaaattgaa agatgcatca gtggtggatt 360
gtgtcacgaa caatgtcacc tgtactcgga tctatgaaaa agtagaataa aaa 413

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&lt;210&gt; 20

&lt;211&gt; 134

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 20

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Met Ala Thr Val Gln Gln Leu Glu Gly Arg Trp Arg Leu Ala Asp Ser
  1             5             10             15

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Lys Gly Phe Asp Ala Tyr Met Lys Lys Leu Gly Val Gly Ile Ser Leu
          20             25             30

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Arg Asn Met Gly Ala Met Ala Lys Pro Asp Cys Ile Ile Thr Cys Asp
      35             40             45

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Gly Lys Asn Leu Thr Ile Lys Thr Glu Ser Thr Leu Lys Thr Thr Gln
      50             55             60

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Phe Ser Cys Thr Leu Gly Glu Lys Phe Glu Gly Thr Thr Ala Val Gly
      65             70             75             80

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Arg Lys Thr Gln Thr Val Cys Ser Phe Thr Asp Gly Ala Leu Val Pro
          85             90             95

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His Gln Glu Trp Asp Gly Lys Glu Asn Thr Ile Thr Arg Lys Leu Lys
      100            105            110

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Asp Ala Ser Val Val Asp Cys Val Thr Asn Asn Val Thr Cys Thr Arg
      115            120            125

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Ile Tyr Glu Lys Val Glu
      130

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&lt;210&gt; 21

&lt;211&gt; 468

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 21

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 ctgtcagcca agctgggtca cttccaaagg tgggagggct tccagcagaa gctcatgagc 120  
 aagaagaaca tgaattcaac actcaacttc ttcattcaat cctacaacaa tgccagcaac 180  
 gacacctact tatatcgagt ccagaggcta attcgaagtc agatgcagct gacgacggga 240  
 gtggagtata tagtcactgt gaagattggc tggaccaaata gcaagaggaa tgacacgagc 300  
 aattcttctt gccccctgca aaccaagaag ctgagaaaga gtttaatttg cgagtcttta 360  
 atatacacca tgccctgggt aaactatttc cagctctgga acaattcctg tctggagccc 420  
 gagcatgtgg gcagaaacct cagatgaggg ctcatatgat tgagttgt 468

&lt;210&gt; 22

&lt;211&gt; 145

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 22

Met Gly Ile Gly Cys Trp Arg Asn Pro Leu Leu Leu Leu Ile Ala Leu  
 1 5 10 15

Val Leu Ser Ala Lys Leu Gly His Phe Gln Arg Trp Glu Gly Phe Gln  
 20 25 30

Gln Lys Leu Met Ser Lys Lys Asn Met Asn Ser Thr Leu Asn Phe Phe  
 35 40 45

Ile Gln Ser Tyr Asn Asn Ala Ser Asn Asp Thr Tyr Leu Tyr Arg Val  
 50 55 60

Gln Arg Leu Ile Arg Ser Gln Met Gln Leu Thr Thr Gly Val Glu Tyr  
 65 70 75 80

Ile Val Thr Val Lys Ile Gly Trp Thr Lys Cys Lys Arg Asn Asp Thr  
 85 90 95

Ser Asn Ser Ser Cys Pro Leu Gln Thr Lys Lys Leu Arg Lys Ser Leu  
 100 105 110

Ile Cys Glu Ser Leu Ile Tyr Thr Met Pro Trp Leu Asn Tyr Phe Gln  
 115 120 125

Leu Trp Asn Asn Ser Cys Leu Glu Pro Glu His Val Gly Arg Asn Leu  
 130 135 140

Arg

145

05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100 101 102 103 104 105 106 107 108 109 110 111 112 113 114 115 116 117 118 119 120 121 122 123 124 125 126 127 128 129 130 131 132 133 134 135 136 137 138 139 140 141 142 143 144 145 146 147 148 149 150 151 152 153 154 155 156 157 158 159 160 161 162 163 164 165 166 167 168 169 170 171 172 173 174 175 176 177 178 179 180 181 182 183 184 185 186 187 188 189 190 191 192 193 194 195 196 197 198 199 200 201 202 203 204 205 206 207 208 209 210 211 212 213 214 215 216 217 218 219 220 221 222 223 224 225 226 227 228 229 230 231 232 233 234 235 236 237 238 239 240 241 242 243 244 245 246 247 248 249 250 251 252 253 254 255 256 257 258 259 260 261 262 263 264 265 266 267 268 269 270 271 272 273 274 275 276 277 278 279 280 281 282 283 284 285 286 287 288 289 290 291 292 293 294 295 296 297 298 299 300 301 302 303 304 305 306 307 308 309 310 311 312 313 314 315 316 317 318 319 320 321 322 323 324 325 326 327 328 329 330 331 332 333 334 335 336 337 338 339 340 341 342 343 344 345 346 347 348 349 350 351 352 353 354 355 356 357 358 359 360 361 362 363 364 365 366 367 368 369 370 371 372 373 374 375 376 377 378 379 380 381 382 383 384 385 386 387 388 389 390 391 392 393 394 395 396 397 398 399 400 401 402 403 404 405 406 407 408 409 410 411 412 413 414 415 416 417 418 419 420 421 422 423 424 425 426 427 428 429 430 431 432 433 434 435 436 437 438 439 440 441 442 443 444 445 446 447 448 449 450 451 452 453 454 455 456 457 458 459 460 461 462 463 464 465 466 467 468 469 470 471 472 473 474 475 476 477 478 479 480 481 482 483 484 485 486 487 488 489 490 491 492 493 494 495 496 497 498 499 500 501 502 503 504 505 506 507 508 509 510 511 512 513 514 515 516 517 518 519 520 521 522 523 524 525 526 527 528 529 530 531 532 533 534 535 536 537 538 539 540 541 542 543 544 545 546 547 548 549 550 551 552 553 554 555 556 557 558 559 560 561 562 563 564 565 566 567 568 569 570 571 572 573 574 575 576 577 578 579 580 581 582 583 584 585 586 587 588 589 590 591 592 593 594 595 596 597 598 599 600 601 602 603 604 605 606 607 608 609 610 611 612 613 614 615 616 617 618 619 620 621 622 623 624 625 626 627 628 629 630 631 632 633 634 635 636 637 638 639 640 641 642 643 644 645 646 647 648 649 650 651 652 653 654 655 656 657 658 659 660 661 662 663 664 665 666 667 668 669 670 671 672 673 674 675 676 677 678 679 680 681 682 683 684 685 686 687 688 689 690 691 692 693 694 695 696 697 698 699 700 701 702 703 704 705 706 707 708 709 710 711 712 713 714 715 716 717 718 719 720 721 722 723 724 725 726 727 728 729 730 731 732 733 734 735 736 737 738 739 740 741 742 743 744 745 746 747 748 749 750 751 752 753 754 755 756 757 758 759 760 761 762 763 764 765 766 767 768 769 770 771 772 773 774 775 776 777 778 779 780 781 782 783 784 785 786 787 788 789 790 791 792 793 794 795 796 797 798 799 800 801 802 803 804 805 806 807 808 809 810 811 812 813 814 815 816 817 818 819 820 821 822 823 824 825 826 827 828 829 830 831 832 833 834 835 836 837 838 839 840 841 842 843 844 845 846 847 848 849 850 851 852 853 854 855 856 857 858 859 860 861 862 863 864 865 866 867 868 869 870 871 872 873 874 875 876 877 878 879 880 881 882 883 884 885 886 887 888 889 890 891 892 893 894 895 896 897 898 899 900 901 902 903 904 905 906 907 908 909 910 911 912 913 914 915 916 917 918 919 920 921 922 923 924 925 926 927 928 929 930 931 932 933 934 935 936 937 938 939 940 941 942 943 944 945 946 947 948 949 950 951 952 953 954 955 956 957 958 959 960 961 962 963 964 965 966 967 968 969 970 971 972 973 974 975 976 977 978 979 980 981 982 983 984 985 986 987 988 989 990 991 992 993 994 995 996 997 998 999 1000 1001 1002 1003 1004 1005 1006 1007 1008 1009 1010 1011 1012 1013 1014 1015 1016 1017 1018 1019 1020 1021 1022 1023 1024 1025 1026 1027 1028 1029 1030 1031 1032 1033 1034 1035 1036 1037 1038 1039 1040 1041

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<210> 23
<211> 278
<212> PRT
<213> Homo sapiens
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<400> 23

Glu	Pro	Val	Pro	Gly	Ser	Arg	Arg	Gln	Thr	Asp	Lys	Gly	Cys	Ser	Gly	
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Asp	Thr	Ala	His	Leu	Pro	Leu	Ser	Cys	Leu	Gly	Ala	Gln	Glu	Ser	Arg	
			20					25						30		
Arg	Pro	Pro	Pro	Arg	Ala	Ser	Thr	Lys	Thr	Gly	Ser	Gln	Pro	Ala	Met	
		35					40						45			
Pro	Ser	Pro	Leu	Arg	Pro	Gln	Gly	Ser	Ala	Gly	Val	Leu	Pro	Glu	Pro	
	50					55					60					
Arg	Val	Pro	Val	Gln	Lys	Pro	Gly	Ile	Asn	Ala	Ala	Ser	Pro	Ile	Gly	
65					70					75					80	
Thr	Val	Lys	Val	Glu	Arg	Gly	Arg	Pro	Thr	Val	Ser	Pro	Ala	Gly	Arg	
				85					90						95	
Gly	Ser	Pro	Arg	Gly	Gly	His	Val	Gly	Gly	Leu	Thr	Ala	Pro	Ser	Thr	
			100					105					110			
Pro	Gly	His	Ser	Asp	His	Gly	Leu	His	Thr	Gln	Lys	Gln	Ser	Gly	Ser	
		115					120					125				
His	Ala	Trp	Leu	Cys	Cys	Gln	Gln	Thr	Ala	Pro	Asn	Leu	Pro	Cys	Ser	
	130					135					140					
Ser	Ser	Gln	Glu	Lys	Arg	Pro	Ala	Ala	Ser	Leu	Pro	Gly	Met	Val	Gly	
145					150					155					160	
Pro	Leu	Arg	His	Ser	Leu	Gly	Val	Gln	Ala	Thr	His	Pro	His	Ser	Thr	
				165					170					175		
Gly	Val	Arg	Gly	Ser	Val	Arg	Pro	Trp	Asp	Gly	Pro	Ala	Gly	Thr	Gly	
			180					185					190			
Gly	Gln	Arg	Val	Arg	Gly	Gly	Arg	Arg	Ser	Pro	Thr	Lys	Gly	Ser	Ser	
		195					200					205				
Gln	Ala	Cys	Val	Gly	Pro	Arg	Gly	Ala	Ala	Pro	Pro	Gly	Trp	Asp	Lys	
	210					215					220					

Ala Gly Ser Trp Leu Ser Ser Ala Thr Ala Gln Leu Pro Gln Gly Thr  
 225 230 235 240

Lys Gly Arg Leu Arg Asp Glu Val Leu Thr His Thr Met Gly Lys Pro  
 245 250 255

Arg His Gly Lys Val Gly Gly Gly Ala Ala Arg Leu Ala Pro Arg Ser  
 260 265 270

Gln Ala Gly Arg Pro Glu  
 275

<210> 24

<211> 284

<212> PRT

<213> Strongylocentrotus purpuratus

<400> 24

Glu Pro Gly Pro Gly Gly Ala Pro Gly Gln Arg Gly Asp Pro Gly Asp  
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Leu Gly Pro Gln Gly Ser Pro Gly Ser Pro Gly Phe Ala Gly Pro Pro  
 20 25 30

Gly Arg Ser Gly Asn Pro Gly Pro Gln Gly Glu Leu Gly Pro Thr Gly  
 35 40 45

Ala Arg Gly Glu Thr Gly Gly Pro Gly Pro Ser Gly Pro Thr Gly Asp  
 50 55 60

Pro Gly Pro Gln Gly Pro Leu Gly Ala Pro Gly Gln Gln Gly Glu Arg  
 65 70 75 80

Gly Glu Thr Gly Pro Gln Gly Gln Gly Gly Pro Pro Gly Pro Ile Gly  
 85 90 95

Ser Leu Gly Ala Pro Gly Ala Gln Gly Pro Pro Gly Pro Thr Gly Pro  
 100 105 110

Ser Gly Asn Ala Gly Ser Pro Gly Gln Pro Gly Ala Arg Gly Glu Pro  
 115 120 125

Gly Gln Ser Gly Ser Pro Gly Gln Pro Gly Leu Ala Gly Arg Thr Gly  
 130 135 140

Pro Ser Gly Glu Arg Gly Asp Lys Gly Asn Asp Gly Gln Ser Gly Pro

145                      150                      155                      160  
 Pro Gly Pro Pro Gly Pro Ala Gly Pro Ala Gly Gln Ser Gly Ile Leu  
                                  165                      170                      175  
 Gly Leu Ala Gly Gly Ser Gly Pro Arg Gly Pro Gly Gly Pro Ala Gly  
                                  180                      185                      190  
 Pro Pro Gly Ala Ala Gly Ser Arg Gly Pro Ala Gly Lys Ser Gly Asp  
                                  195                      200                      205  
 Arg Gly Ser Pro Gly Ala Val Gly Pro Ala Gly Asn Pro Gly Pro Ala  
                                  210                      215                      220  
 Gly Glu Asn Gly Met Pro Gly Ser Asp Gly Asn Asp Gly Ala Pro Gly  
 225                                   230                      235                      240  
 Pro Gln Gly Ser Arg Gly Glu Lys Gly Asp Thr Gly Ala Ser Gly Ala  
                                  245                      250                      255  
 Asn Gly Ser Pro Gly Ala Pro Gly Pro Ile Gly Ala Pro Gly Ala Ala  
                                  260                      265                      270  
 Gly Ala Ser Gly Pro Arg Gly Glu Thr Gly Ser Thr  
                                  275                      280

<210> 25  
 <211> 420  
 <212> DNA  
 <213> Homo sapiens

<400> 25  
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 caatgacccg ttcttcgtgg tggagacgct gtgtatttgt tggttctcct ttgagctgct 120  
 ggtacgcctc ctggtctgtc caagcaaggc tatcttcttc aagaacgtga tgaacctcat 180  
 cgattttgtg gctatccttc cctactttgt ggcactgggc accgagctgg ccggcagcg 240  
 aggggtgggc cagcaggcca tgtcactggc catcctgaga gtcacccgat tgggtgcgtgt 300  
 cttccgcata ttcaagctgt ccggcactc aaagggcctg caaatcttgg gccagacgct 360  
 tcgggcctcc atgcgtgagc tgggcctcct catctttttc ctcttcacgc gtgtggtcct 420

<210> 26  
 <211> 420  
 <212> DNA  
 <213> Homo sapiens

<400> 26



gttccccgct ccgctgaatg gctccagcca aatgcctgga aatccacccc gctgcccctt 60  
 caatgacccg ttcttcgtgg tggagacgct gtgtatttgt tggttctcct ttgagctgct 120  
 ggtacgcctc ctggtctgtc caagcaaggc tatcttcttc aagaacgtga tgaacctcat 180  
 cgattttgtg gctatccttc cctactttgt ggcactgggc accgagctgg cccggcagcg 240  
 aggggtgggc cagcaggcca tgtcactggc catcctgaga gtcattccgat tggcgctgt 300  
 ctccgcctc ttcaagctgt cccggcactc aaagggcctg caaatcttgg gccagacgct 360  
 tcgggcctcc atgcgtgagc tgggcctcct catcttttcc ctcttcacgc gtgtggctcc 420

<210> 27  
 <211> 539  
 <212> PRT  
 <213> Homo sapiens

<400> 27  
 Thr Gly Lys Ala Gln Ser Arg Arg Gly Arg Arg Arg Arg Gly Arg  
 1 5 10 15  
 Ala Gly Arg Ala Ser Arg Gln Arg Ala Arg Gly Arg Pro Val Ala Leu  
 20 25 30  
 Arg Pro Ala Gly Val Thr Val Pro Pro Pro Ser Arg Pro Ser Arg Pro  
 35 40 45  
 Ala Gly Leu Phe Tyr Ala Arg Thr Pro Asp Thr Gly His Arg Ala Gly  
 50 55 60  
 Ala Ala Val Gly Ala Thr Arg Arg Phe Ala Gly Arg Arg Gly Cys Ala  
 65 70 75 80  
 Arg His Gly Ala Ala Val Pro Ala Ala Pro Cys Gly Cys Cys Glu Arg  
 85 90 95  
 Leu Val Leu Asn Val Ala Gly Leu Arg Phe Glu Thr Arg Ala Arg Thr  
 100 105 110  
 Leu Gly Arg Phe Pro Asp Thr Leu Leu Gly Asp Pro Ala Arg Arg Gly  
 115 120 125  
 Arg Phe Tyr Asp Asp Ala Arg Arg Glu Tyr Phe Phe Asp Arg His Arg  
 130 135 140  
 Pro Ser Phe Asp Ala Val Leu Tyr Tyr Tyr Gln Ser Gly Gly Arg Leu  
 145 150 155 160  
 Arg Arg Pro Ala His Val Pro Leu Asp Val Phe Leu Glu Glu Val Ala  
 165 170 175

11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32

Phe Tyr Gly Leu Gly Ala Ala Ala Leu Ala Arg Leu Arg Glu Asp Glu  
180 185 190

Gly Cys Pro Val Pro Pro Glu Arg Pro Leu Pro Arg Arg Ala Phe Ala  
195 200 205

Arg Gln Leu Trp Leu Leu Phe Glu Phe Pro Glu Ser Ser Gln Ala Ala  
210 215 220

Arg	Val	Leu	Ala	Val	Val	Ser	Val	Leu	Val	Ile	Leu	Val	Ser	Ile	Val
225					230					235					240

Val Phe Cys Leu Glu Thr Leu Pro Asp Phe Arg Asp Asp Arg Asp Gly  
245 250 255

Thr Gly Leu Ala Ala Ala Ala Ala Gly Pro Val Phe Pro Ala Pro  
260 265 270

Leu Asn Gly Ser Ser Gln Met Pro Gly Asn Pro Pro Arg Leu Pro Phe  
275 280 285

Asn Asp Pro Phe Phe Val Val Glu Thr Leu Cys Ile Cys Trp Phe Ser  
290 295 300

Phe Glu Leu Leu Val Arg Leu Leu Val Cys Pro Ser Lys Ala Ile Phe  
305 310 315 320

Phe Lys Asn Val Met Asn Leu Ile Asp Phe Val Ala Ile Leu Pro Tyr  
325 330 335

Phe Val Ala Leu Gly Thr Glu Leu Ala Arg Gln Arg Gly Val Gly Gln  
340 345 350

Gln Ala Met Ser Leu Ala Ile Leu Arg Val Ile Arg Leu Val Arg Val  
355 360 365

Phe Arg Ile Phe Lys Leu Ser Arg His Ser Lys Gly Leu Gln Ile Leu  
370 375 380

Gly Gln Thr Leu Arg Ala Ser Met Arg Glu Leu Gly Leu Leu Ile Phe  
385 390 395 400

Phe Leu Phe Ile Gly Val Val Leu Phe Ser Ser Ala Val Tyr Phe Ala  
405 410 415

Glu Val Asp Arg Val Asp Ser His Phe Thr Ser Ile Pro Glu Ser Phe  
420 425 430

[illegible]

Trp Trp Ala Val Val Thr Met Thr Thr Val Gly Tyr Gly Asp Met Ala  
435 440 445

Pro Val Thr Val Gly Gly Lys Ile Val Gly Ser Leu Cys Ala Ile Ala  
450 455 460

Gly Val Leu Thr Ile Ser Leu Pro Val Pro Val Ile Val Ser Asn Phe  
465 470 475 480

Ser Tyr Phe Tyr His Arg Glu Thr Glu Gly Glu Glu Ala Gly Met Phe  
485 490 495

Ser His Val Asp Met Gln Pro Cys Gly Pro Leu Glu Gly Lys Ala Asn  
500 505 510

Gly Gly Leu Val Asp Gly Glu Val Pro Glu Leu Pro Pro Pro Leu Trp  
515 520 525

Ala Pro Pro Arg Glu His Leu Val Thr Glu Val  
530 535

<210> 28

<211> 530

<212> PRT

<213> Mus musculus

<400> 28

Thr Arg Lys Ala Gln Glu Ile His Gly Lys Ala Pro Gly Gly Ser Val  
1 5 10 15

Ser Thr Gly Val Gly Thr Ala Glu Gly Ala Pro Ser Pro Ala Gly Val  
20 25 30

Thr Pro Pro Pro Pro Pro Arg Pro Gly Arg Thr Phe His Ala Ile Phe  
35 40 45

Thr Arg Arg His Arg Thr Pro Asp Trp Gly Gly Cys Gly Val Gly Ala  
50 55 60

Thr Arg Pro Phe Thr Gly Arg Pro Gly Cys Ala Arg His Gly Ala Thr  
65 70 75 80

Val Pro Ala Ala Leu Arg Cys Cys Glu Arg Leu Val Leu Asn Val Ala  
85 90 95

Gly Leu Arg Phe Glu Thr Arg Ala Arg Thr Leu Gly Arg Phe Pro Asp  
100 105 110

Thr Leu Leu Gly Asp Pro Val Arg Arg Ser Arg Phe Tyr Asp Gly Ala  
 115 120 125  
 Arg Ala Glu Tyr Phe Phe Asp Arg His Arg Pro Ser Phe Asp Ala Val  
 130 135 140  
 Leu Tyr Tyr Tyr Gln Ser Gly Gly Arg Leu Arg Arg Pro Ala His Val  
 145 150 155 160  
 Pro Leu Asp Val Phe Leu Glu Glu Val Ser Phe Tyr Gly Leu Gly Arg  
 165 170 175  
 Arg Leu Ala Arg Leu Arg Glu Asp Glu Gly Cys Ala Val Ala Glu Arg  
 180 185 190  
 Pro Leu Pro Pro Pro Phe Ala Arg Gln Leu Trp Leu Leu Phe Glu Phe  
 195 200 205  
 Pro Glu Ser Ser Gln Ala Ala Arg Val Leu Ala Val Val Ser Val Leu  
 210 215 220  
 Val Ile Leu Val Ser Ile Val Val Phe Cys Leu Glu Thr Leu Pro Asp  
 225 230 235 240  
 Phe Arg Asp Asp Arg Asp Asp Pro Gly Leu Ala Pro Val Ala Ala Ala  
 245 250 255  
 Thr Gly Ser Phe Leu Ala Arg Leu Asn Gly Ser Ser Pro Met Pro Gly  
 260 265 270  
 Ala Pro Pro Arg Gln Pro Phe Asn Asp Pro Phe Phe Val Val Glu Thr  
 275 280 285  
 Leu Cys Ile Cys Trp Phe Ser Phe Glu Leu Leu Val His Leu Val Ala  
 290 295 300  
 Cys Pro Ser Lys Ala Val Phe Phe Lys Asn Val Met Asn Leu Ile Asp  
 305 310 315 320  
 Phe Val Ala Ile Leu Pro Tyr Phe Val Ala Leu Gly Thr Glu Leu Ala  
 325 330 335  
 Arg Gln Arg Gly Val Gly Gln Pro Ala Met Ser Leu Ala Ile Leu Arg  
 340 345 350  
 Val Ile Arg Leu Val Arg Val Phe Arg Ile Phe Lys Leu Ser Arg His  
 355 360 365

Ser Lys Gly Leu Gln Ile Leu Gly Gln Thr Leu Arg Ala Ser Met Arg  
 370 375 380

Glu Leu Gly Leu Leu Ile Phe Phe Leu Phe Ile Gly Val Val Leu Phe  
 385 390 395 400

Ser Ser Ala Val Tyr Phe Ala Glu Val Asp Arg Val Asp Thr His Phe  
 405 410 415

Thr Ser Ile Pro Glu Ser Phe Trp Trp Ala Val Val Thr Met Thr Thr  
 420 425 430

Val Gly Tyr Gly Asp Met Ala Pro Val Thr Val Gly Gly Lys Ile Val  
 435 440 445

Gly Ser Leu Cys Ala Ile Ala Gly Val Leu Thr Ile Ser Leu Pro Val  
 450 455 460

Pro Val Ile Val Ser Asn Phe Ser Tyr Phe Tyr His Arg Glu Thr Glu  
 465 470 475 480

Gly Glu Glu Ala Gly Met Tyr Ser His Val Asp Thr Gln Pro Cys Gly  
 485 490 495

Thr Leu Glu Gly Lys Ala Asn Gly Gly Leu Val Asp Ser Glu Val Pro  
 500 505 510

Glu Leu Leu Pro Pro Leu Trp Pro Pro Ala Gly Lys His Met Val Thr  
 515 520 525

Glu Val  
 530

<210> 29

<211> 425

<212> PRT

<213> Homo sapiens

<400> 29

Gly Arg Arg Gly Cys Ala Arg His Gly Ala Ala Val Pro Ala Ala Pro  
 1 5 10 15

Cys Gly Cys Cys Glu Arg Leu Val Leu Asn Val Ala Gly Leu Arg Phe  
 20 25 30

Glu Thr Arg Ala Arg Thr Leu Gly Arg Phe Pro Asp Thr Leu Leu Gly

35				40				45							
Asp	Pro	Ala	Arg	Arg	Gly	Arg	Phe	Tyr	Asp	Asp	Ala	Arg	Arg	Glu	Tyr
50						55			60						
Phe	Phe	Asp	Arg	His	Arg	Pro	Ser	Phe	Asp	Ala	Val	Leu	Tyr	Tyr	Tyr
65				70				75						80	
Gln	Ser	Gly	Gly	Arg	Leu	Arg	Arg	Pro	Ala	His	Val	Pro	Leu	Asp	Val
				85		90								95	
Phe	Leu	Glu	Glu	Val	Ala	Phe	Tyr	Gly	Leu	Gly	Ala	Ala	Ala	Leu	Ala
			100					105					110		
Arg	Leu	Arg	Glu	Asp	Glu	Gly	Cys	Pro	Val	Pro	Pro	Glu	Arg	Pro	Leu
		115				120						125			
Pro	Arg	Arg	Ala	Phe	Ala	Arg	Gln	Leu	Trp	Leu	Leu	Phe	Glu	Phe	Pro
130						135				140					
Glu	Ser	Ser	Gln	Ala	Ala	Arg	Val	Leu	Ala	Val	Val	Ser	Val	Leu	Val
145				150						155				160	
Ile	Leu	Val	Ser	Ile	Val	Val	Phe	Cys	Leu	Glu	Thr	Leu	Pro	Asp	Phe
			165					170					175		
Arg	Asp	Asp	Arg	Asp	Gly	Thr	Gly	Leu	Ala	Ala	Ala	Ala	Ala	Ala	Gly
			180					185					190		
Pro	Val	Phe	Pro	Ala	Pro	Leu	Asn	Gly	Ser	Ser	Gln	Met	Pro	Gly	Asn
		195				200						205			
Pro	Pro	Arg	Leu	Pro	Phe	Asn	Asp	Pro	Phe	Phe	Val	Val	Glu	Thr	Leu
210						215				220					
Cys	Ile	Cys	Trp	Phe	Ser	Phe	Glu	Leu	Leu	Val	Arg	Leu	Leu	Val	Cys
225				230						235				240	
Pro	Ser	Lys	Ala	Ile	Phe	Phe	Lys	Asn	Val	Met	Asn	Leu	Ile	Asp	Phe
			245					250					255		
Val	Ala	Ile	Leu	Pro	Tyr	Phe	Val	Ala	Leu	Gly	Thr	Glu	Leu	Ala	Arg
			260					265					270		
Gln	Arg	Gly	Val	Gly	Gln	Gln	Ala	Met	Ser	Leu	Ala	Ile	Leu	Arg	Val
		275				280						285			
Ile	Arg	Leu	Val	Arg	Val	Phe	Arg	Ile	Phe	Lys	Leu	Ser	Arg	His	Ser

290

295

300

Lys Gly Leu Gln Ile Leu Gly Gln Thr Leu Arg Ala Ser Met Arg Glu  
 305 310 315 320

Leu Gly Leu Leu Ile Phe Phe Leu Phe Ile Gly Val Val Leu Phe Ser  
 325 330 335

Ser Ala Val Tyr Phe Ala Glu Val Asp Arg Val Asp Ser His Phe Thr  
 340 345 350

Ser Ile Pro Glu Ser Phe Trp Trp Ala Val Val Thr Met Thr Thr Val  
 355 360 365

Gly Tyr Gly Asp Met Ala Pro Val Thr Val Gly Gly Lys Ile Val Gly  
 370 375 380

Ser Leu Cys Ala Ile Ala Gly Val Leu Thr Ile Ser Leu Pro Val Pro  
 385 390 395 400

Val Ile Val Ser Asn Phe Ser Tyr Phe Tyr His Arg Glu Thr Glu Gly  
 405 410 415

Glu Glu Ala Gly Met Phe Ser His Val  
 420 425

&lt;210&gt; 30

&lt;211&gt; 424

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 30

Gly Gly Gly Gly Cys Asp Arg Tyr Glu Pro Leu Pro Pro Ser Leu Pro  
 1 5 10 15

Ala Ala Gly Glu Gln Asp Cys Cys Gly Glu Arg Val Val Ile Asn Ile  
 20 25 30

Ser Gly Leu Arg Phe Glu Thr Gln Leu Lys Thr Leu Cys Gln Phe Pro  
 35 40 45

Glu Thr Leu Leu Gly Asp Pro Lys Arg Arg Met Arg Tyr Phe Asp Pro  
 50 55 60

Leu Arg Asn Glu Tyr Phe Phe Asp Arg Asn Arg Pro Ser Phe Asp Ala  
 65 70 75 80

Ile Leu Tyr Tyr Tyr Gln Ser Gly Gly Arg Ile Arg Arg Pro Val Asn  
                             85                            90                            95

Val Pro Ile Asp Ile Phe Ser Glu Glu Ile Arg Phe Tyr Gln Leu Gly  
                             100                            105                            110

Glu Glu Ala Met Glu Lys Phe Arg Glu Asp Glu Gly Phe Leu Arg Glu  
                             115                            120                            125

Glu Glu Arg Pro Leu Pro Arg Arg Asp Phe Gln Arg Gln Val Trp Leu  
                             130                            135                            140

Leu Phe Glu Tyr Pro Glu Ser Ser Gly Pro Ala Arg Gly Ile Ala Ile  
                             145                            150                            155                            160

Val Ser Val Leu Val Ile Leu Ile Ser Ile Val Ile Phe Cys Leu Glu  
                             165                            170                            175

Thr Leu Pro Glu Phe Arg Asp Glu Lys Asp Tyr Pro Ala Ser Thr Ser  
                             180                            185                            190

Gln Asp Ser Phe Glu Ala Ala Gly Asn Ser Thr Ser Gly Ser Arg Ala  
                             195                            200                            205

Gly Ala Ser Ser Phe Ser Asp Pro Phe Phe Val Val Glu Thr Leu Cys  
                             210                            215                            220

Ile Ile Trp Phe Ser Phe Glu Leu Leu Val Arg Phe Phe Ala Cys Pro  
                             225                            230                            235                            240

Ser Lys Ala Thr Phe Ser Arg Asn Ile Met Asn Leu Ile Asp Ile Val  
                             245                            250                            255

Ala Ile Ile Pro Tyr Phe Ile Thr Leu Gly Thr Glu Leu Ala Glu Arg  
                             260                            265                            270

Gln Gly Asn Gly Gln Gln Ala Met Ser Leu Ala Ile Leu Arg Val Ile  
                             275                            280                            285

Arg Leu Val Arg Val Phe Arg Ile Phe Lys Leu Ser Arg His Ser Lys  
                             290                            295                            300

Gly Leu Gln Ile Leu Gly Gln Thr Leu Lys Ala Ser Met Arg Glu Leu  
                             305                            310                            315                            320

Gly Leu Leu Ile Phe Phe Leu Phe Ile Gly Val Ile Leu Phe Ser Ser  
                             325                            330                            335



Ala Val Tyr Phe Ala Glu Ala Asp Asp Pro Thr Ser Gly Phe Ser Ser  
 340 345 350

Ile Pro Asp Ala Phe Trp Trp Ala Val Val Thr Met Thr Thr Val Gly  
 355 360 365

Tyr Gly Asp Met His Pro Val Thr Ile Gly Gly Lys Ile Val Gly Ser  
 370 375 380

Leu Cys Ala Ile Ala Gly Val Leu Thr Ile Ala Leu Pro Val Pro Val  
 385 390 395 400

Ile Val Ser Asn Phe Asn Tyr Phe Tyr His Arg Glu Thr Glu Gly Glu  
 405 410 415

Glu Gln Ser Gln Tyr Met His Val  
 420

<210> 31

<211> 532

<212> PRT

<213> Mus musculus

<400> 31

Met Thr Thr Arg Lys Ala Gln Glu Ile His Gly Lys Ala Pro Gly Gly  
 1 5 10 15

Ser Val Ser Thr Gly Val Gly Thr Ala Glu Gly Ala Pro Ser Pro Ala  
 20 25 30

Gly Val Thr Pro Pro Pro Pro Pro Arg Pro Gly Arg Thr Phe His Ala  
 35 40 45

Ile Phe Thr Arg Arg His Arg Thr Pro Asp Trp Gly Gly Cys Gly Val  
 50 55 60

Gly Ala Thr Arg Pro Phe Thr Gly Arg Pro Gly Cys Ala Arg His Gly  
 65 70 75 80

Ala Thr Val Pro Ala Ala Leu Arg Cys Cys Glu Arg Leu Val Leu Asn  
 85 90 95

Val Ala Gly Leu Arg Phe Glu Thr Arg Ala Arg Thr Leu Gly Arg Phe  
 100 105 110

Pro Asp Thr Leu Leu Gly Asp Pro Val Arg Arg Ser Arg Phe Tyr Asp  
 115 120 125

Gly Ala Arg Ala Glu Tyr Phe Phe Asp Arg His Arg Pro Ser Phe Asp  
 130 135 140

Ala Val Leu Tyr Tyr Tyr Gln Ser Gly Gly Arg Leu Arg Arg Pro Ala  
 145 150 155 160

His Val Pro Leu Asp Val Phe Leu Glu Glu Val Ser Phe Tyr Gly Leu  
 165 170 175

Gly Arg Arg Leu Ala Arg Leu Arg Glu Asp Glu Gly Cys Ala Val Ala  
 180 185 190

Glu Arg Pro Leu Pro Pro Pro Phe Ala Arg Gln Leu Trp Leu Leu Phe  
 195 200 205

Glu Phe Pro Glu Ser Ser Gln Ala Ala Arg Val Leu Ala Val Val Ser  
 210 215 220

Val Leu Val Ile Leu Val Ser Ile Val Val Phe Cys Leu Glu Thr Leu  
 225 230 235 240

Pro Asp Phe Arg Asp Asp Arg Asp Asp Pro Gly Leu Ala Pro Val Ala  
 245 250 255

Ala Ala Thr Gly Ser Phe Leu Ala Arg Leu Asn Gly Ser Ser Pro Met  
 260 265 270

Pro Gly Ala Pro Pro Arg Gln Pro Phe Asn Asp Pro Phe Phe Val Val  
 275 280 285

Glu Thr Leu Cys Ile Cys Trp Phe Ser Phe Glu Leu Leu Val His Leu  
 290 295 300

Val Ala Cys Pro Ser Lys Ala Val Phe Phe Lys Asn Val Met Asn Leu  
 305 310 315 320

Ile Asp Phe Val Ala Ile Leu Pro Tyr Phe Val Ala Leu Gly Thr Glu  
 325 330 335

Leu Ala Arg Gln Arg Gly Val Gly Gln Pro Ala Met Ser Leu Ala Ile  
 340 345 350

Leu Arg Val Ile Arg Leu Val Arg Val Phe Arg Ile Phe Lys Leu Ser  
 355 360 365

Arg His Ser Lys Gly Leu Gln Ile Leu Gly Gln Thr Leu Arg Ala Ser  
 370 375 380

Met Arg Glu Leu Gly Leu Leu Ile Phe Phe Leu Phe Ile Gly Val Val  
 385 390 395 400

Leu Phe Ser Ser Ala Val Tyr Phe Ala Glu Val Asp Arg Val Asp Thr  
 405 410 415

His Phe Thr Ser Ile Pro Glu Ser Phe Trp Trp Ala Val Val Thr Met  
 420 425 430

Thr Thr Val Gly Tyr Gly Asp Met Ala Pro Val Thr Val Gly Gly Lys  
 435 440 445

Ile Val Gly Ser Leu Cys Ala Ile Ala Gly Val Leu Thr Ile Ser Leu  
 450 455 460

Pro Val Pro Val Ile Val Ser Asn Phe Ser Tyr Phe Tyr His Arg Glu  
 465 470 475 480

Thr Glu Gly Glu Glu Ala Gly Met Tyr Ser His Val Asp Thr Gln Pro  
 485 490 495

Cys Gly Thr Leu Glu Gly Lys Ala Asn Gly Gly Leu Val Asp Ser Glu  
 500 505 510

Val Pro Glu Leu Leu Pro Pro Leu Trp Pro Pro Ala Gly Lys His Met  
 515 520 525

Val Thr Glu Val  
 530

<210> 32  
 <211> 523  
 <212> PRT  
 <213> Homo sapiens

<400> 32  
 Met Thr Val Val Pro Gly Asp His Leu Leu Glu Pro Glu Val Ala Asp  
 1 5 10 15

Gly Gly Gly Ala Pro Pro Gln Gly Gly Cys Gly Gly Gly Gly Cys Asp  
 20 25 30

Arg Tyr Glu Pro Leu Pro Pro Ser Leu Pro Ala Ala Gly Glu Gln Asp  
 35 40 45

Cys Cys Gly Glu Arg Val Val Ile Asn Ile Ser Gly Leu Arg Phe Glu

50	55	60
Thr Gln Leu Lys Thr Leu Cys Gln Phe Pro Glu Thr Leu Leu Gly Asp		
65	70	75 80
Pro Lys Arg Arg Met Arg Tyr Phe Asp Pro Leu Arg Asn Glu Tyr Phe		
	85	90 95
Phe Asp Arg Asn Arg Pro Ser Phe Asp Ala Ile Leu Tyr Tyr Tyr Gln		
	100	105 110
Ser Gly Gly Arg Ile Arg Arg Pro Val Asn Val Pro Ile Asp Ile Phe		
	115	120 125
Ser Glu Glu Ile Arg Phe Tyr Gln Leu Gly Glu Glu Ala Met Glu Lys		
	130	135 140
Phe Arg Glu Asp Glu Gly Phe Leu Arg Glu Glu Glu Arg Pro Leu Pro		
145	150	155 160
Arg Arg Asp Phe Gln Arg Gln Val Trp Leu Leu Phe Glu Tyr Pro Glu		
	165	170 175
Ser Ser Gly Pro Ala Arg Gly Ile Ala Ile Val Ser Val Leu Val Ile		
	180	185 190
Leu Ile Ser Ile Val Ile Phe Cys Leu Glu Thr Leu Pro Glu Phe Arg		
	195	200 205
Asp Glu Lys Asp Tyr Pro Ala Ser Thr Ser Gln Asp Ser Phe Glu Ala		
	210	215 220
Ala Gly Asn Ser Thr Ser Gly Ser Arg Ala Gly Ala Ser Ser Phe Ser		
225	230	235 240
Asp Pro Phe Phe Val Val Glu Thr Leu Cys Ile Ile Trp Phe Ser Phe		
	245	250 255
Glu Leu Leu Val Arg Phe Phe Ala Cys Pro Ser Lys Ala Thr Phe Ser		
	260	265 270
Arg Asn Ile Met Asn Leu Ile Asp Ile Val Ala Ile Ile Pro Tyr Phe		
	275	280 285
Ile Thr Leu Gly Thr Glu Leu Ala Glu Arg Gln Gly Asn Gly Gln Gln		
	290	295 300
Ala Met Ser Leu Ala Ile Leu Arg Val Ile Arg Leu Val Arg Val Phe		

305		310		315		320
Arg Ile Phe Lys Leu Ser Arg His Ser Lys Gly Leu Gln Ile Leu Gly						
	325		330		335	
Gln Thr Leu Lys Ala Ser Met Arg Glu Leu Gly Leu Leu Ile Phe Phe						
	340		345		350	
Leu Phe Ile Gly Val Ile Leu Phe Ser Ser Ala Val Tyr Phe Ala Glu						
	355		360		365	
Ala Asp Asp Pro Thr Ser Gly Phe Ser Ser Ile Pro Asp Ala Phe Trp						
	370		375		380	
Trp Ala Val Val Thr Met Thr Thr Val Gly Tyr Gly Asp Met His Pro						
	385		390		395	400
Val Thr Ile Gly Gly Lys Ile Val Gly Ser Leu Cys Ala Ile Ala Gly						
	405		410		415	
Val Leu Thr Ile Ala Leu Pro Val Pro Val Ile Val Ser Asn Phe Asn						
	420		425		430	
Tyr Phe Tyr His Arg Glu Thr Glu Gly Glu Glu Gln Ser Gln Tyr Met						
	435		440		445	
His Val Gly Ser Cys Gln His Leu Ser Ser Ser Ala Glu Glu Leu Arg						
	450		455		460	
Lys Ala Arg Ser Asn Ser Thr Leu Ser Lys Ser Glu Tyr Met Val Ile						
	465		470		475	480
Glu Glu Gly Gly Met Asn His Ser Ala Phe Pro Gln Thr Pro Phe Lys						
	485		490		495	
Thr Gly Asn Ser Thr Ala Thr Cys Thr Thr Asn Asn Asn Pro Asn Ser						
	500		505		510	
Cys Val Asn Ile Lys Lys Ile Phe Thr Asp Val						
	515		520			

<210> 33  
 <211> 525  
 <212> PRT  
 <213> Rattus norvegicus  
  
 <400> 33

Met Thr Val Val Pro Gly Asp His Leu Leu Glu Pro Glu Ala Ala Gly  
 1 5 10 15  
 Gly Gly Gly Gly Asp Pro Pro Gln Gly Gly Cys Val Ser Gly Gly Gly  
 20 25 30  
 Cys Asp Arg Tyr Glu Pro Leu Pro Pro Ala Leu Pro Ala Ala Gly Glu  
 35 40 45  
 Gln Asp Cys Cys Gly Glu Arg Val Val Ile Asn Ile Ser Gly Leu Arg  
 50 55 60  
 Phe Glu Thr Gln Leu Lys Thr Leu Cys Gln Phe Pro Glu Thr Leu Leu  
 65 70 75 80  
 Gly Asp Pro Lys Arg Arg Met Arg Tyr Phe Asp Pro Leu Arg Asn Glu  
 85 90 95  
 Tyr Phe Phe Asp Arg Asn Arg Pro Ser Phe Asp Ala Ile Leu Tyr Tyr  
 100 105 110  
 Tyr Gln Ser Gly Gly Arg Ile Arg Arg Pro Val Asn Val Pro Ile Asp  
 115 120 125  
 Ile Phe Ser Glu Glu Ile Arg Phe Tyr Gln Leu Gly Glu Glu Ala Met  
 130 135 140  
 Glu Lys Phe Arg Glu Asp Glu Gly Phe Leu Arg Glu Glu Glu Arg Pro  
 145 150 155 160  
 Leu Pro Arg Arg Asp Phe Gln Arg Gln Val Trp Leu Leu Phe Glu Tyr  
 165 170 175  
 Pro Glu Ser Ser Arg Pro Ala Arg Gly Ile Ala Ile Val Ser Val Leu  
 180 185 190  
 Val Ile Leu Ile Ser Ile Val Ile Phe Cys Leu Glu Thr Leu Pro Glu  
 195 200 205  
 Phe Arg Asp Glu Lys Asp Tyr Pro Ala Ser Pro Ser Gln Asp Val Phe  
 210 215 220  
 Glu Ala Ala Asn Asn Ser Thr Ser Gly Ala Ser Ser Gly Ala Ser Ser  
 225 230 235 240  
 Phe Ser Asp Pro Phe Phe Val Val Glu Thr Leu Cys Ile Ile Trp Phe  
 245 250 255

Ser Phe Glu Leu Leu Val Arg Phe Phe Ala Cys Pro Ser Lys Ala Thr  
260 265 270

Phe Ser Arg Asn Ile Met Asn Leu Ile Asp Ile Val Ala Ile Ile Pro  
275 280 285

Tyr Phe Ile Thr Leu Gly Thr Glu Leu Ala Glu Arg Gln Gly Asn Gly  
290 295 300

Gln Gln Ala Met Ser Leu Ala Ile Leu Arg Val Ile Arg Leu Val Arg  
305 310 315 320

Val Phe Arg Ile Phe Lys Leu Ser Arg His Ser Lys Gly Leu Gln Ile  
325 330 335

Leu Gly Gln Thr Leu Lys Ala Ser Met Arg Glu Leu Gly Leu Leu Ile  
340 345 350

Phe Phe Leu Phe Ile Gly Val Ile Leu Phe Ser Ser Ala Val Tyr Phe  
355 360 365

Ala Glu Ala Asp Asp Pro Ser Ser Gly Phe Asn Ser Ile Pro Asp Ala  
370 375 380

Phe Trp Trp Ala Val Val Thr Met Thr Thr Val Gly Tyr Gly Asp Met  
385 390 395 400

His Pro Val Thr Ile Gly Gly Lys Ile Val Gly Ser Leu Cys Ala Ile  
405 410 415

Ala Gly Val Leu Thr Ile Ala Leu Pro Val Pro Val Ile Val Ser Asn  
420 425 430

Phe Asn Tyr Phe Tyr His Arg Glu Thr Glu Gly Glu Glu Gln Ala Gln  
435 440 445

Tyr Met His Val Gly Ser Cys Gln His Leu Ser Ser Ser Ala Glu Glu  
450 455 460

Leu Arg Lys Ala Arg Ser Asn Ser Thr Leu Ser Lys Ser Glu Tyr Met  
465 470 475 480

Val Ile Glu Glu Gly Gly Met Asn His Ser Ala Phe Pro Gln Thr Pro  
485 490 495

Phe Lys Thr Gly Asn Ser Thr Ala Thr Cys Thr Thr Asn Asn Asn Pro  
500 505 510

Asn Ser Cys Val Asn Ile Lys Lys Ile Phe Thr Asp Val  
515 520 525

<210> 34  
<211> 360  
<212> DNA  
<213> Homo sapiens

<400> 34  
agtttggatt tgcttatgaa aaagataaaa ggaaaagacc tacagctctt agaaatgaac 60  
aaagagaatg aagtattgaa aatcaagctg caagcctcca gagaagcagg agcagcagct 120  
ctgagaaaacg tggcccagag attatttgaa aactaccaaaa cgcaatctga agaagtgaga 180  
aagaagcagg agggcagtaa acaattactc caggttaaca agcttgaaaa agaacagaaa 240  
ttgaaacaac atgttgaaaa tctgaatcaa gttgctgaaa aacttgaaga aaaacacagt 300  
caaattacag aattggagaa ccttgtacag agaattggaaa aggaaaagag aacactacta 360

<210> 35  
<211> 360  
<212> DNA  
<213> Homo sapiens

<400> 35  
agtttggatt tgcttatgaa aaagataaaa ggaaaagacc tacagctctt agaaatgaac 60  
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ctgagaaaacg tggcccagag attatttgaa aactaccaaaa cgcaatctga agaagtgaga 180  
aagaagcagg aggacagtaa acaattactc caggttaaca agcttgaaaa agaacagaaa 240  
ttgaaacaac atgttgaaaa tctgaatcaa gttgctgaaa aacttgaaga aaaacacagt 300  
caaattacag aattggagaa ccttgtacag agaattggaaa aggaaaagag aacactacta 360

<210> 36  
<211> 170  
<212> PRT  
<213> Homo sapiens

<400> 36  
Ala Leu Arg Asn Val Ala Gln Arg Leu Phe Glu Asn Tyr Gln Thr Gln  
1 5 10 15  
Ser Glu Glu Val Arg Lys Lys Gln Glu Gly Ser Lys Gln Leu Leu Gln  
20 25 30  
Val Asn Lys Leu Glu Lys Glu Gln Lys Leu Lys Gln His Val Glu Asn  
35 40 45  
Leu Asn Gln Val Ala Glu Lys Leu Glu Glu Lys His Ser Gln Ile Thr



50 55 60

Glu Leu Glu Asn Leu Val Gln Arg Met Glu Lys Glu Lys Arg Thr Leu  
65 70 75 80

Leu Glu Arg Lys Leu Ser Leu Glu Asn Lys Leu Leu Gln Leu Lys Ser  
85 90 95

Ser Ala Thr Tyr Gly Lys Ser Cys Gln Asp Leu Gln Arg Glu Ile Ser  
100 105 110

Ile Leu Gln Glu Gln Ile Ser His Leu Gln Phe Val Ile His Ser Gln  
115 120 125

His Gln Asn Leu Arg Ser Val Ile Gln Glu Met Glu Gly Leu Lys Asn  
130 135 140

Asn Leu Lys Glu Gln Asp Lys Arg Ile Glu Asn Leu Arg Glu Lys Val  
145 150 155 160

Asn Ile Leu Glu Ala Gln Asn Lys Glu Leu  
165 170

<210> 37  
<211> 170  
<212> PRT  
<213> Bos taurus

<400> 37

Ser Leu Arg Lys Thr Val Gln Asp Leu Leu Val Lys Leu Gln Glu Ala  
1 5 10 15

Glu Gln Gln His Gln Ser Asp Cys Ser Ala Phe Lys Val Thr Leu Ser  
20 25 30

Gln Tyr Gln Arg Glu Ala Lys Gln Ser Gln Val Ala Leu Gln Arg Ala  
35 40 45

Glu Asp Arg Ala Glu Gln Lys Glu Ala Glu Val Gly Glu Leu Gln Arg  
50 55 60

Arg Leu Gln Gly Met Glu Thr Glu Tyr Gln Ala Ile Leu Ala Lys Val  
65 70 75 80

Arg Glu Gly Glu Thr Ala Leu Glu Glu Leu Arg Ser Lys Asn Val Asp  
85 90 95

Cys Gln Ala Glu Gln Glu Lys Ala Ala Asn Leu Glu Lys Glu Val Ala  
 100 105 110

Gly Leu Arg Glu Lys Ile His His Leu Asp Asp Met Leu Lys Ser Gln  
 115 120 125

Gln Arg Lys Val Arg Gln Met Ile Glu Gln Leu Gln Asn Ser Lys Ala  
 130 135 140

Val Ile Gln Ser Lys Asp Thr Thr Ile Gln Glu Leu Lys Glu Lys Ile  
 145 150 155 160

Ala Tyr Leu Glu Ala Glu Asn Leu Glu Met  
 165 170

<210> 38

<211> 1056

<212> DNA

<213> Homo sapiens

<400> 38

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ggggcagtcc acaaaacaat tcgcagagag cttaatctgc cagaggatgg ccagccccct 960
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<210> 39

<211> 321

<212> PRT

<213> Homo sapiens

<400> 39

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 1 5 10 15  
 Pro Arg Lys Ala Leu Leu Ile Ala Gly Ile Ser Gln Ser Cys Ser Val  
 20 25 30  
 Ala Glu Ile Glu Glu Ala Leu Gln Ala Gly Leu Ala Pro Leu Gly Glu  
 35 40 45  
 Tyr Arg Leu Leu Gly Arg Met Phe Arg Arg Asp Glu Asn Arg Lys Val  
 50 55 60  
 Ala Leu Val Gly Leu Thr Ala Glu Thr Ser His Ala Leu Val Pro Lys  
 65 70 75 80  
 Glu Ile Pro Gly Lys Gly Gly Ile Trp Arg Val Ile Phe Lys Pro Pro  
 85 90 95  
 Asp Pro Asp Asn Thr Phe Leu Ser Arg Leu Asn Glu Phe Leu Ala Gly  
 100 105 110  
 Glu Gly Met Thr Val Gly Glu Leu Ser Arg Ala Leu Gly His Glu Asn  
 115 120 125  
 Gly Ser Leu Asp Pro Glu Gln Gly Met Ile Pro Glu Met Trp Ala Pro  
 130 135 140  
 Met Leu Ala Gln Ala Leu Glu Ala Leu Gln Pro Ala Leu Gln Cys Leu  
 145 150 155 160  
 Lys Tyr Lys Lys Leu Arg Val Phe Ser Gly Arg Glu Ser Pro Glu Pro  
 165 170 175  
 Gly Glu Glu Glu Phe Gly Arg Trp Met Phe His Thr Thr Gln Met Ile  
 180 185 190  
 Lys Ala Trp Gln Val Pro Asp Val Glu Lys Arg Arg Arg Leu Leu Glu  
 195 200 205  
 Ser Leu Arg Gly Pro Ala Leu Asp Val Ile Arg Val Leu Lys Ile Asn  
 210 215 220  
 Asn Pro Leu Ile Thr Val Asp Glu Cys Leu Gln Ala Leu Glu Glu Val  
 225 230 235 240  
 Phe Gly Val Thr Asp Asn Pro Arg Glu Leu Gln Val Lys Tyr Leu Thr  
 245 250 255

Thr Tyr Gln Lys Asp Glu Glu Lys Leu Ser Ala Tyr Val Leu Arg Leu  
260 265 270

Glu Pro Leu Leu Gln Lys Leu Val Gln Arg Gly Ala Ile Glu Arg Asp  
275 280 285

Ala Val Asn Gln Ala Arg Leu Asp Gln Val Ile Ala Gly Ala Val His  
290 295 300

Lys Thr Ile Arg Arg Glu Leu Asn Leu Pro Glu Asp Gly Pro Ala Pro  
305 310 315 320

Gly

<210> 40

<211> 318

<212> PRT

<213> Homo sapiens

<220>

<221> VARIANT

<222> (20)

<223> Wherein Xaa is any amino acid as defined in the  
specification

<400> 40

Met Ala Met Thr Leu Leu Glu Asp Trp Cys Arg Gly Met Asp Val Asn  
1 5 10 15

Ser Gln Arg Xaa Leu Leu Val Trp Gly Ile Pro Val Asn Cys Asp Glu  
20 25 30

Ala Glu Ile Glu Glu Thr Leu Gln Ala Ala Met Pro Gln Val Ser Tyr  
35 40 45

Arg Met Leu Gly Arg Met Phe Trp Arg Glu Glu Asn Ala Lys Ala Ala  
50 55 60

Leu Leu Glu Leu Thr Gly Ala Val Asp Tyr Ala Ala Ile Pro Arg Glu  
65 70 75 80

Met Pro Gly Lys Gly Gly Val Trp Lys Val Leu Phe Lys Pro Pro Thr  
85 90 95

Ser Asp Ala Glu Phe Leu Glu Arg Leu His Leu Phe Leu Ala Arg Glu  
100 105 110

Gly Trp Thr Val Gln Asp Val Ala Arg Val Leu Gly Phe Gln Asn Pro  
 115 120 125

Thr Pro Thr Pro Gly Pro Glu Met Pro Ala Glu Met Leu Asn Tyr Ile  
 130 135 140

Leu Asp Asn Val Ile Gln Pro Leu Val Glu Ser Ile Trp Tyr Lys Arg  
 145 150 155 160

Leu Thr Leu Phe Ser Gly Lys Gly His Pro Arg Ala Trp Arg Gly Asn  
 165 170 175

Phe Asp Pro Trp Leu Glu His Thr Asn Glu Val Leu Glu Glu Trp Gln  
 180 185 190

Val Ser Asp Val Glu Lys Arg Arg Arg Leu Met Glu Ser Leu Arg Gly  
 195 200 205

Pro Ala Ala Asp Val Ile Arg Ile Leu Lys Ser Asn Asn Pro Ala Ile  
 210 215 220

Thr Thr Ala Glu Cys Leu Lys Ala Leu Glu Gln Val Phe Gly Ser Val  
 225 230 235 240

Glu Ser Ser Arg Asp Ala Gln Ile Lys Phe Leu Asn Thr Tyr Gln Asn  
 245 250 255

Pro Gly Glu Lys Leu Ser Ala Tyr Val Ile Arg Leu Glu Pro Leu Leu  
 260 265 270

Gln Lys Val Val Glu Lys Gly Ala Ile Asp Lys Asp Asn Val Asn Gln  
 275 280 285

Ala Arg Leu Glu Gln Val Ile Ala Gly Ala Asn His Ser Gly Ala Ile  
 290 295 300

Arg Arg Gln Leu Trp Leu Thr Gly Ala Gly Glu Gly Pro Gly  
 305 310 315

<210> 41

<211> 120

<212> PRT

<213> Homo sapiens

<400> 41

Leu Arg Leu Leu Glu Asp Trp Cys Arg Gly Met Asp Met Asn Pro Arg

1                      5                      10                      15  
 Lys Ala Leu Leu Ile Ala Gly Ile Ser Gln Ser Cys Ser Val Ala Glu  
                     20                      25                      30  
 Ile Glu Glu Ala Leu Gln Ala Gly Leu Ala Pro Leu Gly Glu Tyr Arg  
                     35                      40                      45  
 Leu Leu Gly Arg Met Phe Arg Arg Asp Glu Asn Arg Lys Val Ala Leu  
                     50                      55                      60  
 Val Gly Leu Thr Ala Glu Thr Ser His Ala Leu Val Pro Lys Glu Ile  
                     65                      70                      75                      80  
 Pro Gly Lys Gly Gly Ile Trp Arg Val Ile Phe Lys Pro Pro Asp Pro  
                     85                      90                      95  
 Asp Asn Thr Phe Leu Ser Arg Leu Asn Glu Phe Leu Ala Gly Glu Gly  
                     100                      105                      110  
 Met Thr Val Gly Glu Leu Ser Arg  
                     115                      120

<210> 42  
 <211> 120  
 <212> PRT  
 <213> Homo sapiens

<400> 42  
 Leu Ala Leu Leu Glu Asp Trp Cys Arg Ile Met Ser Val Asp Glu Gln  
                     1                      5                      10                      15  
 Lys Ser Leu Met Val Thr Gly Ile Pro Ala Asp Phe Glu Glu Ala Glu  
                     20                      25                      30  
 Ile Gln Glu Val Leu Gln Glu Thr Leu Lys Ser Leu Gly Arg Tyr Arg  
                     35                      40                      45  
 Leu Leu Gly Lys Ile Phe Arg Lys Gln Glu Asn Ala Asn Ala Val Leu  
                     50                      55                      60  
 Leu Glu Leu Leu Glu Asp Thr Asp Val Ser Ala Ile Pro Ser Glu Val  
                     65                      70                      75                      80  
 Gln Gly Lys Gly Gly Val Trp Lys Val Ile Phe Lys Thr Pro Asn Gln  
                     85                      90                      95

Asp Thr Glu Phe Leu Glu Arg Leu Asn Leu Phe Leu Glu Lys Glu Gly  
 100 105 110

Gln Thr Val Ser Gly Met Phe Arg  
 115 120

<210> 43  
 <211> 438  
 <212> DNA  
 <213> Homo sapiens

<400> 43  
 cacgctccgc acaccagcct gcgcgcacca tgggccaccg ttcagcagct ggaaggaaga 60  
 tggcgccctgg cggacagcaa aggcctttgat gcatacatga agaaactagg agtggaata 120  
 tctttgcgca atatgggcgc aatggccaaa ccagactgta tcatcacttg tgatggcaaa 180  
 aacctcacca taaaaactga gagcactttg aaaacaacac agttttcttg taccctggga 240  
 gagaagtgtt aaggaaccac agctgttggc agaaaaactc agactgtctg cagctttaca 300  
 gatggtgcat tggttccgca tcaggagtgg gatgggaagg aaaacacaat aacaagaaaa 360  
 ttgaaagatg catcagtggg ggattgtgtc acgaacaatg tcacctgtac tcggatctat 420  
 gaaaaagtag aataaaaa 438

<210> 44  
 <211> 444  
 <212> DNA  
 <213> Homo sapiens

<400> 44  
 ccctctctgc acgccagccc gccgcacccc accatggcca cagttcagca gctggaagga 60  
 agatggcgcc tggtagacag caaaggcttt gatgaatata tgaaggagct aggagtggga 120  
 atagctttgc gaaaaatggg cgcaatggcc aagccagatt gtatcatcac ttgtgatggg 180  
 aaaaacctca ccataaaaaac tgagagcact ttgaaaacaa cacagttttc ttgtaccttg 240  
 ggagagaagt ttgaagaaac cacagctgat ggcagaaaaa ctgagactgt ctgcaacttt 300  
 acagatgggt cattggttca gcatcaggag tgggatggga aggaaagcac aataacaaga 360  
 aaattgaaag atgggaaatt agtgggtggg tgtgtcatga acaatgtcac ctgtactcgg 420  
 atctatgaaa aagtagaata aaaa 444

<210> 45  
 <211> 403  
 <212> DNA  
 <213> Homo sapiens

<400> 45  
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 atacatgaag aaactaggag tgggaatatc tttgcgcaat atgggcgcaa tggccaaacc 120  
 agactgtatc atcacttgtg atggcaaaaa ctcaccata aaaactgaga gcactttgaa 180

aacaacacag ttttcttgta ccctgggaga gaagtttgaa ggaaccacag ctgttggcag 240  
 aaaaactcag actgtctgca gctttacaga tgggtcattg gtccgcacac aggagtggga 300  
 tgggaaggaa aacacaataa caagaaaatt gaaagatgca tcagtgggtg attgtgtcac 360  
 gaacaatgtc acctgtactc ggatctatga aaaagtagaa taa 403

<210> 46  
 <211> 406  
 <212> DNA  
 <213> Homo sapiens

<400> 46  
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 atacatgaag gagctaggag tgggaatagc ttgcgaaaa atgggcgcaa tggccaagcc 120  
 agattgtatc atcacttggt atggtaaaaa cctcaccata aaaactgaga gcactttgaa 180  
 aacaacacag ttttcttgta ccctgggaga gaagtttgaa gaaaccacag ctgatggcag 240  
 aaaaactcag actgtctgca actttacaga tgggtcattg gtccgcacac aggagtggga 300  
 tgggaaggaa agcacaataa caagaaaatt gaaagatggg aaattagtgg tggagtgtgt 360  
 catgaacaat gtcacctgta ctcggtatga tgaaaaagta gaataa 406

<210> 47  
 <211> 133  
 <212> PRT  
 <213> Homo sapiens

<400> 47  
 Ala Thr Val Gln Gln Leu Glu Gly Arg Trp Arg Leu Ala Asp Ser Lys  
 1 5 10 15  
 Gly Phe Asp Ala Tyr Met Lys Lys Leu Gly Val Gly Ile Ser Leu Arg  
 20 25 30  
 Asn Met Gly Ala Met Ala Lys Pro Asp Cys Ile Ile Thr Cys Asp Gly  
 35 40 45  
 Lys Asn Leu Thr Ile Lys Thr Glu Ser Thr Leu Lys Thr Thr Gln Phe  
 50 55 60  
 Ser Cys Thr Leu Gly Glu Lys Phe Glu Gly Thr Thr Ala Val Gly Arg  
 65 70 75 80  
 Lys Thr Gln Thr Val Cys Ser Phe Thr Asp Gly Ala Leu Val Pro His  
 85 90 95  
 Gln Glu Trp Asp Gly Lys Glu Asn Thr Ile Thr Arg Lys Leu Lys Asp  
 100 105 110



Ala Ser Val Val Asp Cys Val Thr Asn Asn Val Thr Cys Thr Arg Ile  
 115 120 125

Tyr Glu Lys Val Glu  
 130

<210> 48  
 <211> 134  
 <212> PRT  
 <213> Homo sapiens

<400> 48  
 Ala Thr Val Gln Gln Leu Glu Gly Arg Trp Arg Leu Val Asp Ser Lys  
 1 5 10 15

Gly Phe Asp Glu Tyr Met Lys Glu Leu Gly Val Gly Ile Ala Leu Arg  
 20 25 30

Lys Met Gly Ala Met Ala Lys Pro Asp Cys Ile Ile Thr Cys Asp Gly  
 35 40 45

Lys Asn Leu Thr Ile Lys Thr Glu Ser Thr Leu Lys Thr Thr Gln Phe  
 50 55 60

Ser Cys Thr Leu Gly Glu Lys Phe Glu Glu Thr Thr Ala Asp Gly Arg  
 65 70 75 80

Lys Thr Gln Thr Val Cys Asn Phe Thr Asp Gly Ala Leu Val Gln His  
 85 90 95

Gln Glu Trp Asp Gly Lys Glu Ser Thr Ile Thr Arg Lys Leu Lys Asp  
 100 105 110

Gly Lys Leu Val Val Glu Cys Val Met Asn Asn Val Thr Cys Thr Arg  
 115 120 125

Ile Tyr Glu Lys Val Glu  
 130

<210> 49  
 <211> 135  
 <212> PRT  
 <213> Homo sapiens

<400> 49  
 Met Ala Thr Val Gln Gln Leu Glu Gly Arg Trp Arg Leu Val Asp Ser

1                      5                      10                      15  
 Lys Gly Phe Asp Glu Tyr Met Lys Glu Leu Gly Val Gly Ile Ala Leu  
                     20                      25                      30  
 Arg Lys Met Gly Ala Met Ala Lys Pro Asp Cys Ile Ile Thr Cys Asp  
                     35                      40                      45  
 Gly Lys Asn Leu Thr Ile Lys Thr Glu Ser Thr Leu Lys Thr Thr Gln  
                     50                      55                      60  
 Phe Ser Cys Thr Leu Gly Glu Lys Phe Glu Glu Thr Thr Ala Asp Gly  
                     65                      70                      75                      80  
 Arg Lys Thr Gln Thr Val Cys Asn Phe Thr Asp Gly Ala Leu Val Gln  
                     85                      90                      95  
 His Gln Glu Trp Asp Gly Lys Glu Ser Thr Ile Thr Arg Lys Leu Lys  
                     100                      105                      110  
 Asp Gly Lys Leu Val Val Glu Cys Val Met Asn Asn Val Thr Cys Thr  
                     115                      120                      125  
 Arg Ile Tyr Glu Lys Val Glu  
                     130                      135

<210> 50

<211> 135

<212> PRT

<213> Homo sapiens

<400> 50

Met Ala Thr Val Gln Gln Leu Glu Gly Arg Trp Arg Leu Val Asp Ser  
 1                      5                      10                      15

Lys Gly Phe Asp Glu Tyr Met Lys Glu Leu Gly Val Gly Ile Ala Leu  
                     20                      25                      30

Arg Lys Met Gly Ala Met Ala Lys Pro Asp Cys Ile Ile Thr Cys Asp  
                     35                      40                      45

Gly Lys Asn Leu Thr Ile Lys Thr Glu Ser Thr Leu Lys Thr Thr Gln  
                     50                      55                      60

Phe Ser Cys Thr Leu Gly Glu Lys Phe Glu Glu Thr Thr Ala Asp Gly  
                     65                      70                      75                      80

Arg Lys Thr Gln Thr Val Cys Asn Phe Thr Asp Gly Ala Leu Val Gln  
85 90 95

His Gln Glu Trp Asp Gly Lys Glu Ser Thr Ile Thr Arg Lys Leu Lys  
100 105 110

Asp Gly Lys Leu Val Val Glu Cys Val Met Asn Asn Val Thr Cys Thr  
115 120 125

Arg Ile Tyr Glu Lys Val Glu  
130 135

<210> 51

<211> 135

<212> PRT

<213> Rattus norvegicus

<400> 51

Met Ala Ser Leu Lys Asp Leu Glu Gly Lys Trp Arg Leu Val Glu Ser  
1 5 10 15

His Gly Phe Glu Asp Tyr Met Lys Glu Leu Gly Val Gly Leu Ala Leu  
20 25 30

Arg Lys Met Gly Ala Met Ala Lys Pro Asp Cys Ile Ile Thr Leu Asp  
35 40 45

Gly Asn Asn Leu Thr Val Lys Thr Glu Ser Thr Val Lys Thr Thr Val  
50 55 60

Phe Ser Cys Thr Leu Gly Glu Lys Phe Asp Glu Thr Thr Ala Asp Gly  
65 70 75 80

Arg Lys Thr Glu Thr Val Cys Thr Phe Thr Asp Gly Ala Leu Val Gln  
85 90 95

His Gln Lys Trp Glu Gly Lys Glu Ser Thr Ile Thr Arg Lys Leu Lys  
100 105 110

Asp Gly Lys Met Val Val Glu Cys Val Met Asn Asn Ala Ile Cys Thr  
115 120 125

Arg Val Tyr Glu Lys Val Gln  
130 135

<210> 52

&lt;211&gt; 135

&lt;212&gt; PRT

&lt;213&gt; Mus musculus

&lt;400&gt; 52

Met Ala Ser Leu Lys Asp Leu Glu Gly Lys Trp Arg Leu Met Glu Ser  
 1 5 10 15

His Gly Phe Glu Glu Tyr Met Lys Glu Leu Gly Val Gly Leu Ala Leu  
 20 25 30

Arg Lys Met Ala Ala Met Ala Lys Pro Asp Cys Ile Ile Thr Cys Asp  
 35 40 45

Gly Asn Asn Ile Thr Val Lys Thr Glu Ser Thr Val Lys Thr Thr Val  
 50 55 60

Phe Ser Cys Asn Leu Gly Glu Lys Phe Asp Glu Thr Thr Ala Asp Gly  
 65 70 75 80

Arg Lys Thr Glu Thr Val Cys Thr Phe Gln Asp Gly Ala Leu Val Gln  
 85 90 95

His Gln Gln Trp Asp Gly Lys Glu Ser Thr Ile Thr Arg Lys Leu Lys  
 100 105 110

Asp Gly Lys Met Ile Val Glu Cys Val Met Asn Asn Ala Thr Cys Thr  
 115 120 125

Arg Val Tyr Glu Lys Val Gln  
 130 135

&lt;210&gt; 53

&lt;211&gt; 228

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 53

gctgtagaca tggggatcgg atgctggaga aacccctgc tgctgctgat tgccctggtc 60  
 ctgtcagcca agctgggtca cttccaaagg tgggagggt tccagcagaa gctcatgagc 120  
 aagaagaaca tgaattcaac actcaacttc ttcattcaat cctacaacaa tgccagcaac 180  
 gacacctact tatatcgagt ccagaggcta attcgaagtc agatgcag 228

&lt;210&gt; 54

&lt;211&gt; 228

&lt;212&gt; DNA

<213> Homo sapiens

<400> 54

gctgtagaca tggggatcgg atgctggaga aaccccctgc tgctgctgat tgccctggtc 60  
 ctgtcagcca agctgggtca cttccaaagg tgggagggct tccagcagaa gctcatgagc 120  
 aagaagaaca tgaattcaac actcaacttc ttcattcaat cctacaacaa tgccagcaac 180  
 gacacctact tatatcgagt ccagaggcta attcgaagtc agatgcag 228

<210> 55

<211> 98

<212> PRT

<213> Homo sapiens

<400> 55

Ser Lys Lys Asn Met Asn Ser Thr Leu Asn Phe Phe Ile Gln Ser Tyr  
 1 5 10 15

Asn Asn Ala Ser Asn Asp Thr Tyr Leu Tyr Arg Val Gln Arg Leu Ile  
 20 25 30

Arg Ser Gln Met Gln Leu Thr Thr Gly Val Glu Tyr Ile Val Thr Val  
 35 40 45

Lys Ile Gly Trp Thr Lys Cys Lys Arg Asn Asp Thr Ser Asn Ser Ser  
 50 55 60

Cys Pro Leu Gln Thr Lys Lys Leu Arg Lys Ser Leu Ile Cys Glu Ser  
 65 70 75 80

Leu Ile Tyr Thr Met Pro Trp Leu Asn Tyr Phe Gln Leu Trp Asn Asn  
 85 90 95

Ser Cys

<210> 56

<211> 99

<212> PRT

<213> Rattus norvegicus

<400> 56

Ser Glu Glu Gly Val Gln Arg Ala Leu Asp Phe Ala Val Ser Glu Tyr  
 1 5 10 15

Asn Lys Gly Ser Asn Asp Ala Tyr His Ser Arg Ala Ile Gln Val Val  
 20 25 30

Arg Ala Arg Lys Gln Leu Val Ala Gly Ile Asn Tyr Tyr Leu Asp Val  
 35 40 45

Glu Met Gly Arg Thr Thr Cys Thr Lys Ser Gln Thr Asn Leu Thr Asn  
 50 55 60

Cys Pro Phe His Asp Gln Pro His Leu Met Arg Lys Ala Leu Cys Ser  
 65 70 75 80

Phe Gln Ile Tyr Ser Val Pro Trp Lys Gly Thr His Thr Leu Thr Lys  
 85 90 95

Ser Ser Cys

<210> 57  
 <211> 99  
 <212> PRT  
 <213> Homo sapiens

<400> 57  
 Met Ser Lys Lys Asn Met Asn Ser Thr Leu Asn Phe Phe Ile Gln Ser  
 1 5 10 15

Tyr Asn Asn Ala Ser Asn Asp Thr Tyr Leu Tyr Arg Val Gln Arg Leu  
 20 25 30

Ile Arg Ser Gln Met Gln Leu Thr Thr Gly Val Glu Tyr Ile Val Thr  
 35 40 45

Val Lys Ile Gly Trp Thr Lys Cys Lys Arg Asn Asp Thr Ser Asn Ser  
 50 55 60

Ser Cys Pro Leu Gln Thr Lys Lys Leu Arg Lys Ser Leu Ile Cys Glu  
 65 70 75 80

Ser Leu Ile Tyr Thr Met Pro Trp Leu Asn Tyr Phe Gln Leu Trp Asn  
 85 90 95

Asn Ser Cys

<210> 58  
 <211> 101  
 <212> PRT

<213> Homo sapiens

<400> 58

Leu Asn Asp Lys Ser Val Gln Cys Ala Leu Asp Phe Ala Ile Ser Glu  
1 5 10 15

Tyr Asn Lys Val Ile Asn Lys Asp Glu Tyr Tyr Ser Arg Pro Leu Gln  
20 25 30

Val Met Ala Ala Tyr Gln Gln Ile Val Gly Gly Val Asn Tyr Tyr Phe  
35 40 45

Asn Val Lys Phe Gly Arg Thr Thr Cys Thr Lys Ser Gln Pro Asn Leu  
50 55 60

Asp Asn Cys Pro Phe Asn Asp Gln Pro Lys Leu Lys Glu Glu Glu Phe  
65 70 75 80

Cys Ser Phe Gln Ile Asn Glu Val Pro Trp Glu Asp Lys Ile Ser Ile  
85 90 95

Leu Asn Tyr Lys Cys  
100

<210> 59

<211> 18

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:  
Oligonucleotide primer

<400> 59

tctccacag gccaggac

18

<210> 60

<211> 18

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:  
Oligonucleotide primer

<400> 60

cgcatggttt tgggattg

18

<210> 61

<211> 33

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:  
Oligonucleotide primer

<400> 61

ggatccgccca agctgggtca cttccaaagg tgg

33

<210> 62

<211> 32

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:  
Oligonucleotide primer

<400> 62

ctcgagtctg aggtttctgc ccacatgctc gg

32

<210> 63

<211> 21

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:  
Oligonucleotide primer

<400> 63

gtggagtata tagtcactgt g

21

<210> 64

<211> 21

<212> DNA

<213> Artificial Sequence

<220>



<223> Description of Artificial Sequence:  
Oligonucleotide primer

<400> 64

cacagtgact atatactcga g

21

<210> 65

<211> 378

<212> DNA

<213> Homo sapiens

<400> 65

gccaaagctgg gtcacttcca aagggtgggag ggcttccagc agaagctcat gagcaagaag 60  
aacatgaatt caacactcaa cttcttcatt caatcctaca acaatgccag caacgacacc 120  
tacttatatc gaggccagag gctaattcga agtcagatgc agctgacgac gggagtgagg 180  
tatatagtca ctgtgaagat tggccggacc aaatgcaaga ggaatgacac gagcaattct 240  
tcctgcccc tgcaaagcaa gaagctgaga aagagtttaa tttgcgagtc tttgatatac 300  
accatgccct ggataaacta tttccagctc tggaacaatt cctgtctgga ggccgagcat 360  
gtgggcagaa acctcaga 378

<210> 66

<211> 126

<212> PRT

<213> Homo sapiens

<400> 66

Ala Lys Leu Gly His Phe Gln Arg Trp Glu Gly Phe Gln Gln Lys Leu  
1 5 10 15  
Met Ser Lys Lys Asn Met Asn Ser Thr Leu Asn Phe Phe Ile Gln Ser  
20 25 30  
Tyr Asn Asn Ala Ser Asn Asp Thr Tyr Leu Tyr Arg Val Gln Arg Leu  
35 40 45  
Ile Arg Ser Gln Met Gln Leu Thr Thr Gly Val Glu Tyr Ile Val Thr  
50 55 60  
Val Lys Ile Gly Arg Thr Lys Cys Lys Arg Asn Asp Thr Ser Asn Ser  
65 70 75 80  
Ser Cys Pro Leu Gln Ser Lys Lys Leu Arg Lys Ser Leu Ile Cys Glu  
85 90 95  
Ser Leu Ile Tyr Thr Met Pro Trp Ile Asn Tyr Phe Gln Leu Trp Asn  
100 105 110

Asn Ser Cys Leu Glu Ala Glu His Val Gly Arg Asn Leu Arg  
 115 120 125

<210> 67  
 <211> 378  
 <212> DNA  
 <213> Homo sapiens

<400> 67  
 gccaaagctgg gtcacttcca aagggtgggag ggcttccagc agaagctcat gagcaagaag 60  
 aacatgaatt caacactcaa cttcttcatt caatcctaca acaatgccag caacgacacc 120  
 tacttatatc gagtccagag gctaattcga agtcagatgc agctgacgac gggagtgagg 180  
 tatatagtca ctgtgaagat tggctggacc aaatgcaaga ggaatgacac gagcaattct 240  
 tcctgcccc tgcaaaccaa gaagctgaga aagagttaa tttgcgagtc tttaatatac 300  
 accatgcctt ggttaaacta tttccagctc tggaacaatt cctgtctgga gcccgagcat 360  
 gtgggcagaa acctcaga 378

<210> 68  
 <211> 126  
 <212> PRT  
 <213> Homo sapiens

<400> 68  
 Ala Lys Leu Gly His Phe Gln Arg Trp Glu Gly Phe Gln Gln Lys Leu  
 1 5 10 15  
 Met Ser Lys Lys Asn Met Asn Ser Thr Leu Asn Phe Phe Ile Gln Ser  
 20 25 30  
 Tyr Asn Asn Ala Ser Asn Asp Thr Tyr Leu Tyr Arg Val Gln Arg Leu  
 35 40 45  
 Ile Arg Ser Gln Met Gln Leu Thr Thr Gly Val Glu Tyr Ile Val Thr  
 50 55 60  
 Val Lys Ile Gly Trp Thr Lys Cys Lys Arg Asn Asp Thr Ser Asn Ser  
 65 70 75 80  
 Ser Cys Pro Leu Gln Thr Lys Lys Leu Arg Lys Ser Leu Ile Cys Glu  
 85 90 95  
 Ser Leu Ile Tyr Thr Met Pro Trp Leu Asn Tyr Phe Gln Leu Trp Asn  
 100 105 110  
 Asn Ser Cys Leu Glu Pro Glu His Val Gly Arg Asn Leu Arg

115

120

125

<210> 69  
 <211> 1482  
 <212> DNA  
 <213> Homo sapiens

<400> 69  
 gtgtgtgggt gtccaggtgc ctttccagcg gcttccccag tggagtctct ggcatacaagg 60  
 acatttcctg taaaagggtc cttgttgaag aggggaagcca gtcttaatat gatggaaaca 120  
 tctctgaact tctaaaagac caagggttggc gttttagctc tattaattttt acttcgtctt 180  
 ggccagaatt cacaatgaca acagtggcag tgaccacaga aattccccca agggataaga 240  
 tggaagataa ttctgccttg tatgagtcta cgtccgctca cattattgaa gaaaccgagt 300  
 atgtgaaaaa gattcgaaact actctgcaaa agatcaggac ccagatgttt aaagatgaaa 360  
 taagacatga cagtacaaat cacaaactag atgcaaagca ctgtggaaac cttcaacagg 420  
 gctctgattc tgaaatggat ccttcttgtt gcagtttgga ttgcttatg aaaaagataa 480  
 aaggaaaaga cctacagctc ttagaaatga acaaagagaa tgaagtattg aaaatcaagc 540  
 tgcaagcctc cagagaagca ggagcagcag ctctgagaaa cgtggcccag agattatttg 600  
 aaaactacca aacgcaatct gaagaagtga gaaagaagca ggaggacagt aaacaattac 660  
 tccaggttaa caagcttgaa aaagaacaga aattgaaaca acatgttgaa aatctgaatc 720  
 aagttgctga aaaacttgaa gaaaaacaca gtcaaattac agaattggag aaccttgtac 780  
 agagaatgga aaaggaaaag agaacactac tagaaagaaa actgtctttg gaaaacaagc 840  
 tactgcaact caaatccagt gctacatatg gaaaaagttg ccaggatctt cagagggaga 900  
 tttccattct ccaggagcag atctctcatc tgcagtttgt gattcactcc caacatcaga 960  
 acctgcgcag tgtcatccag gagatggaag gattaaaaaa taatttaaaa gaacaagaca 1020  
 aaagaattga aaatctcaga gaaaagggtta acatacttga agcccagaat aaagaactaa 1080  
 aaaccaggt agcactttca tctgaaactc ctaggacaaa ggtatctaag gctgtctcta 1140  
 caagtgaatt gaagaccgaa ggtgtttccc cttatttaat gttgattagg ttacggaaat 1200  
 gaactggctg gatgaagatc tgatttagaa agactgcgtg agtcttattt attctctgaa 1260  
 acacagccca agtttcatgt taaaatggca aaatgccatt atttaaatgg aacttattac 1320  
 ataccaatgg ctttgcaaga agatgacatt tcagaaaatc aaacaaatct atatttaatg 1380  
 gatggactct tcaaaactta ccaaatagtt gaagaaacca ggtgccttct catgatggaa 1440  
 gacagattct gctttaaatt aaaaaaaaaa aaatctgaaa aa 1482

<210> 70  
 <211> 424  
 <212> PRT  
 <213> Homo sapiens

<400> 70  
 Gly Gly Gly Gly Cys Asp Arg Tyr Glu Pro Leu Pro Pro Ser Leu Pro  
 1 5 10 15  
 Ala Ala Gly Glu Gln Asp Cys Cys Gly Glu Arg Val Val Ile Asn Ile  
 20 25 30

Ser Gly Leu Arg Phe Glu Thr Gln Leu Lys Thr Leu Cys Gln Phe Pro  
35 40 45

Glu Thr Leu Leu Gly Asp Pro Lys Arg Arg Met Arg Tyr Phe Asp Pro  
50 55 60

Leu Arg Asn Glu Tyr Phe Phe Asp Arg Asn Arg Pro Ser Phe Asp Ala  
65 70 75 80

Ile Leu Tyr Tyr Tyr Gln Ser Gly Gly Arg Ile Arg Arg Pro Val Asn  
85 90 95

Val Pro Ile Asp Ile Phe Ser Glu Glu Ile Arg Phe Tyr Gln Leu Gly  
100 105 110

Glu Glu Ala Met Glu Lys Phe Arg Glu Asp Glu Gly Phe Leu Arg Glu  
115 120 125

Glu Glu Arg Pro Leu Pro Arg Arg Asp Phe Gln Arg Gln Val Trp Leu  
130 135 140

Leu Phe Glu Tyr Pro Glu Ser Ser Gly Pro Ala Arg Gly Ile Ala Ile  
145 150 155 160

Val Ser Val Leu Val Ile Leu Ile Ser Ile Val Ile Phe Cys Leu Glu  
165 170 175

Thr Leu Pro Glu Phe Arg Asp Glu Lys Asp Tyr Pro Ala Ser Thr Ser  
180 185 190

Gln Asp Ser Phe Glu Ala Ala Gly Asn Ser Thr Ser Gly Ser Arg Ala  
195 200 205

Gly Ala Ser Ser Phe Ser Asp Pro Phe Phe Val Val Glu Thr Leu Cys  
210 215 220

Ile Ile Trp Phe Ser Phe Glu Leu Leu Val Arg Phe Phe Ala Cys Pro  
225 230 235 240

Ser Lys Ala Thr Phe Ser Arg Asn Ile Met Asn Leu Ile Asp Ile Val  
245 250 255

Ala Ile Ile Pro Tyr Phe Ile Thr Leu Gly Thr Glu Leu Ala Glu Arg  
260 265 270

Gln Gly Asn Gly Gln Gln Ala Met Ser Leu Ala Ile Leu Arg Val Ile  
275 280 285

Arg Leu Val Arg Val Phe Arg Ile Phe Lys Leu Ser Arg His Ser Lys  
 290 295 300

Gly Leu Gln Ile Leu Gly Gln Thr Leu Lys Ala Ser Met Arg Glu Leu  
 305 310 315 320

Gly Leu Leu Ile Phe Phe Leu Phe Ile Gly Val Ile Leu Phe Ser Ser  
 325 330 335

Ala Val Tyr Phe Ala Glu Ala Asp Asp Pro Thr Ser Gly Phe Ser Ser  
 340 345 350

Ile Pro Asp Ala Phe Trp Trp Ala Val Val Thr Met Thr Thr Val Gly  
 355 360 365

Tyr Gly Asp Met His Pro Val Thr Ile Gly Gly Lys Ile Val Gly Ser  
 370 375 380

Leu Cys Ala Ile Ala Gly Val Leu Thr Ile Ala Leu Pro Val Pro Val  
 385 390 395 400

Ile Val Ser Asn Phe Asn Tyr Phe Tyr His Arg Glu Thr Glu Gly Glu  
 405 410 415

Glu Gln Ser Gln Tyr Met His Val  
 420

<210> 71

<211> 132

<212> PRT

<213> Homo sapiens

<400> 71

Met Glu Pro Val Pro Gly Ser Arg Arg Gln Thr Asp Lys Gly Cys Ser  
 1 5 10 15

Gly Asp Thr Ala His Leu Pro Leu Ser Cys Leu Gly Ala Gln Glu Ser  
 20 25 30

Arg Arg Pro Pro Arg Ala Ser Thr Lys Thr Gly Ser Gln Pro Ala  
 35 40 45

Met Pro Ser Pro Leu Arg Pro Gln Gly Ser Ala Gly Val Leu Pro Glu  
 50 55 60

Pro Arg Val Pro Val Gln Lys Pro Gly Ile Asn Ala Ala Ser Pro Ile  
 65 70 75 80

Gly Thr Val Arg Val Glu Arg Gly Arg Pro Thr Val Ser Pro Ala Gly  
85 90 95

Arg Gly Ser Pro Arg Gly Gly His Val Gly Gly Leu Thr Ala Pro Ser  
100 105 110

Thr Pro Gly His Ser Asp His Gly Leu His Thr Gln Lys Gln Ser Gly  
115 120 125

Ser His Ala Trp  
130

<210> 72

<211> 132

<212> PRT

<213> Strongylocentrotus purpuratus

<400> 72

Met Glu Pro Val Pro Gly Ser Arg Arg Gln Thr Asp Lys Gly Cys Ser  
1 5 10 15

Gly Asp Thr Ala His Leu Pro Leu Ser Cys Leu Gly Ala Gln Glu Ser  
20 25 30

Arg Arg Pro Pro Pro Arg Ala Ser Thr Lys Thr Gly Ser Gln Pro Ala  
35 40 45

Met Pro Ser Pro Leu Arg Pro Gln Gly Ser Ala Gly Val Leu Pro Glu  
50 55 60

Pro Arg Val Pro Val Gln Lys Pro Gly Ile Asn Ala Ala Ser Pro Ile  
65 70 75 80

Gly Thr Val Arg Val Glu Arg Gly Arg Pro Thr Val Ser Pro Ala Gly  
85 90 95

Arg Gly Ser Pro Arg Gly Gly His Val Gly Gly Leu Thr Ala Pro Ser  
100 105 110

Thr Pro Gly His Ser Asp His Gly Leu His Thr Gln Lys Gln Ser Gly  
115 120 125

Ser His Ala Trp  
130

&lt;210&gt; 73

&lt;211&gt; 312

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 73

Met Thr Leu Arg Leu Leu Glu Asp Trp Cys Arg Gly Met Asp Met Asn  
 1 5 10 15

Pro Arg Lys Ala Leu Leu Ile Ala Gly Ile Ser Gln Ser Cys Ser Val  
 20 25 30

Ala Glu Ile Glu Glu Ala Leu Gln Ala Gly Leu Ala Pro Leu Gly Glu  
 35 40 45

Tyr Arg Leu Leu Gly Arg Met Phe Arg Arg Asp Glu Asn Arg Lys Val  
 50 55 60

Ala Leu Val Gly Leu Thr Ala Glu Thr Ser His Ala Leu Val Pro Lys  
 65 70 75 80

Glu Ile Pro Gly Lys Gly Gly Ile Trp Arg Val Ile Phe Lys Pro Pro  
 85 90 95

Asp Pro Asp Asn Thr Phe Leu Ser Arg Leu Asn Glu Phe Leu Ala Gly  
 100 105 110

Glu Gly Met Thr Val Gly Glu Leu Ser Arg Ala Leu Gly His Glu Asn  
 115 120 125

Gly Ser Leu Asp Pro Glu Gln Gly Met Ile Pro Glu Met Trp Ala Pro  
 130 135 140

Met Leu Ala Gln Ala Leu Glu Ala Leu Gln Pro Ala Leu Gln Cys Leu  
 145 150 155 160

Lys Tyr Lys Lys Leu Arg Val Phe Ser Gly Arg Glu Ser Pro Glu Pro  
 165 170 175

Gly Glu Glu Glu Phe Gly Arg Trp Met Phe His Thr Thr Gln Met Ile  
 180 185 190

Lys Ala Trp Gln Val Pro Asp Val Glu Lys Arg Arg Arg Leu Leu Glu  
 195 200 205

Ser Leu Arg Gly Pro Ala Leu Asp Val Ile Arg Val Leu Lys Ile Asn  
 210 215 220

Asn Pro Leu Ile Thr Val Asp Glu Cys Leu Gln Ala Leu Glu Glu Val  
 225 230 235 240

Phe Gly Val Thr Asp Asn Pro Arg Glu Leu Gln Val Lys Tyr Leu Thr  
 245 250 255

Thr Tyr Gln Lys Asp Glu Glu Lys Leu Ser Ala Tyr Val Leu Arg Leu  
 260 265 270

Glu Pro Leu Leu Gln Lys Leu Val Gln Arg Gly Ala Ile Glu Arg Asp  
 275 280 285

Ala Val Asn Gln Ala Arg Leu Asp Gln Val Ile Ala Gly Ala Val His  
 290 295 300

Lys Thr Ile Arg Arg Glu Leu Asn  
 305 310

<210> 74

<211> 312

<212> PRT

<213> Homo sapiens

<400> 74

Met Thr Leu Arg Leu Leu Glu Asp Trp Cys Arg Gly Met Asp Met Asn  
 1 5 10 15

Pro Arg Lys Ala Leu Leu Ile Ala Gly Ile Ser Gln Ser Cys Ser Val  
 20 25 30

Ala Glu Ile Glu Glu Ala Leu Gln Ala Gly Leu Ala Pro Leu Gly Glu  
 35 40 45

Tyr Arg Leu Leu Gly Arg Met Phe Arg Arg Asp Glu Asn Arg Lys Val  
 50 55 60

Ala Leu Val Gly Leu Thr Ala Glu Thr Ser His Ala Leu Val Pro Lys  
 65 70 75 80

Glu Ile Pro Gly Lys Gly Gly Ile Trp Arg Val Ile Phe Lys Pro Pro  
 85 90 95

Asp Pro Asp Asn Thr Phe Leu Ser Arg Leu Asn Glu Phe Leu Ala Gly  
 100 105 110

Glu Gly Met Thr Val Gly Glu Leu Ser Arg Ala Leu Gly His Glu Asn  
 115 120 125



Gly Ser Leu Asp Pro Glu Gln Gly Met Ile Pro Glu Met Trp Ala Pro  
 130 135 140

Met Leu Ala Gln Ala Leu Glu Ala Leu Gln Pro Ala Leu Gln Cys Leu  
 145 150 155 160

Lys Tyr Lys Lys Leu Arg Val Phe Ser Gly Arg Glu Ser Pro Glu Pro  
 165 170 175

Gly Glu Glu Glu Phe Gly Arg Trp Met Phe His Thr Thr Gln Met Ile  
 180 185 190

Lys Ala Trp Gln Val Pro Asp Val Glu Lys Arg Arg Arg Leu Leu Glu  
 195 200 205

Ser Leu Arg Gly Pro Ala Leu Asp Val Ile Arg Val Leu Lys Ile Asn  
 210 215 220

Asn Pro Leu Ile Thr Val Asp Glu Cys Leu Gln Ala Leu Glu Glu Val  
 225 230 235 240

Phe Gly Val Thr Asp Asn Pro Arg Glu Leu Gln Val Lys Tyr Leu Thr  
 245 250 255

Thr Tyr Gln Lys Asp Glu Glu Lys Leu Ser Ala Tyr Val Leu Arg Leu  
 260 265 270

Glu Pro Leu Leu Gln Lys Leu Val Gln Arg Gly Ala Ile Glu Arg Asp  
 275 280 285

Ala Val Asn Gln Ala Arg Leu Asp Gln Val Ile Ala Gly Ala Val His  
 290 295 300

Lys Thr Ile Arg Arg Glu Leu Asn  
 305 310

<210> 75

<211> 425

<212> PRT

<213> Homo sapiens

<400> 75

Gly Arg Arg Gly Cys Ala Arg His Gly Ala Ala Val Pro Ala Ala Pro  
 1 5 10 15

Cys Gly Cys Cys Glu Arg Leu Val Leu Asn Val Ala Gly Leu Arg Phe

20	25	30
Glu Thr Arg Ala Arg Thr Leu Gly Arg Phe Pro Asp Thr Leu Leu Gly		
35	40	45
Asp Pro Ala Arg Arg Gly Arg Phe Tyr Asp Asp Ala Arg Arg Glu Tyr		
50	55	60
Phe Phe Asp Arg His Arg Pro Ser Phe Asp Ala Val Leu Tyr Tyr Tyr		
65	70	75
80		
Gln Ser Gly Gly Arg Leu Arg Arg Pro Ala His Val Pro Leu Asp Val		
85	90	95
Phe Leu Glu Glu Val Ala Phe Tyr Gly Leu Gly Ala Ala Ala Leu Ala		
100	105	110
Arg Leu Arg Glu Asp Glu Gly Cys Pro Val Pro Pro Glu Arg Pro Leu		
115	120	125
Pro Arg Arg Ala Phe Ala Arg Gln Leu Trp Leu Leu Phe Glu Phe Pro		
130	135	140
Glu Ser Ser Gln Ala Ala Arg Val Leu Ala Val Val Ser Val Leu Val		
145	150	155
160		
Ile Leu Val Ser Ile Val Val Phe Cys Leu Glu Thr Leu Pro Asp Phe		
165	170	175
Arg Asp Asp Arg Asp Gly Thr Gly Leu Ala Ala Ala Ala Ala Ala Gly		
180	185	190
Pro Val Phe Pro Ala Pro Leu Asn Gly Ser Ser Gln Met Pro Gly Asn		
195	200	205
Pro Pro Arg Leu Pro Phe Asn Asp Pro Phe Phe Val Val Glu Thr Leu		
210	215	220
Cys Ile Cys Trp Phe Ser Phe Glu Leu Leu Val Arg Leu Leu Val Cys		
225	230	235
240		
Pro Ser Lys Ala Ile Phe Phe Lys Asn Val Met Asn Leu Ile Asp Phe		
245	250	255
Val Ala Ile Leu Pro Tyr Phe Val Ala Leu Gly Thr Glu Leu Ala Arg		
260	265	270
Gln Arg Gly Val Gly Gln Gln Ala Met Ser Leu Ala Ile Leu Arg Val		

275		280		285
Ile Arg Leu Val Arg Val Phe Arg Ile Phe Lys Leu Ser Arg His Ser				
290		295		300
Lys Gly Leu Gln Ile Leu Gly Gln Thr Leu Arg Ala Ser Met Arg Glu				
305		310		315
				320
Leu Gly Leu Leu Ile Phe Phe Leu Phe Ile Gly Val Val Leu Phe Ser				
		325		330
				335
Ser Ala Val Tyr Phe Ala Glu Val Asp Arg Val Asp Ser His Phe Thr				
		340		345
				350
Ser Ile Pro Glu Ser Phe Trp Trp Ala Val Val Thr Met Thr Thr Val				
		355		360
				365
Gly Tyr Gly Asp Met Ala Pro Val Thr Val Gly Gly Lys Ile Val Gly				
		370		375
				380
Ser Leu Cys Ala Ile Ala Gly Val Leu Thr Ile Ser Leu Pro Val Pro				
		385		390
				395
				400
Val Ile Val Ser Asn Phe Ser Tyr Phe Tyr His Arg Glu Thr Glu Gly				
		405		410
				415
Glu Glu Ala Gly Met Phe Ser His Val				
		420		425